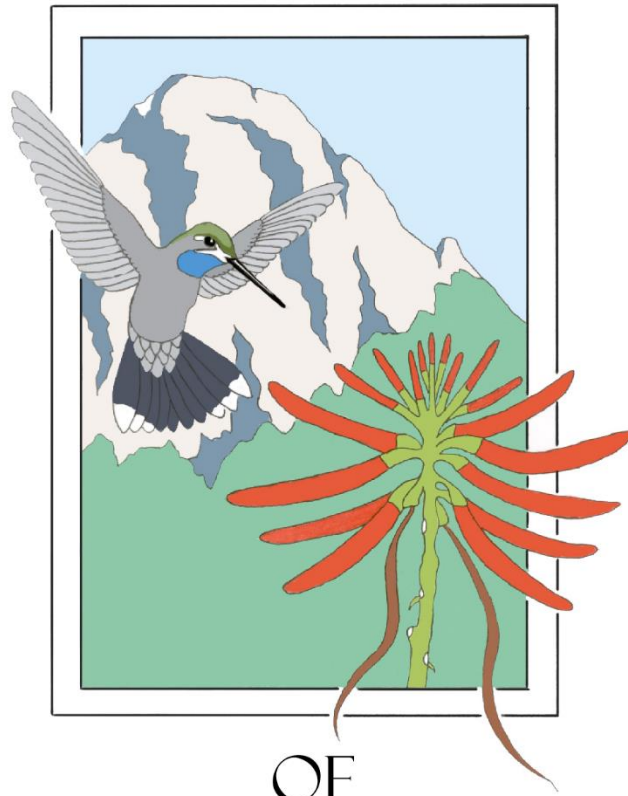


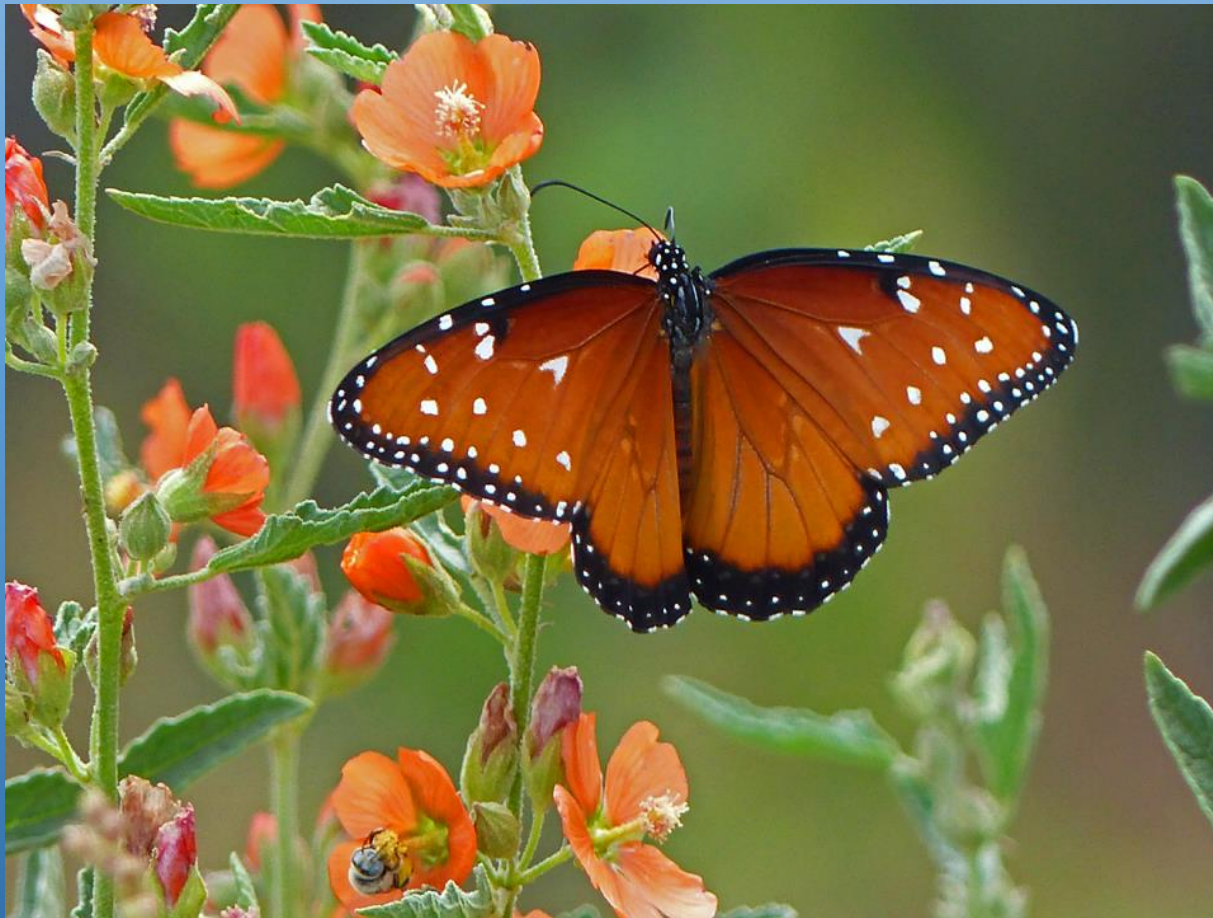
FRIENDS



OF

MADERA CANYON

Who Cares About Insects?



Queen Butterfly

Insects live all around us everyday!



Oslar's Imperial Moth

Some insects are very beautiful!

Insects live all around us everyday!



Cottonwood Stag Beetle

Some insects are definitely NOT!

Insects live all around us everyday!



Walking Stick

Some insects hide away in plain sight!

Insects live all around us everyday!



Giant Mesquite Bugs

Some insects really stand out!

Insects live all around us everyday!



Tarantula Hawk Wasp

Some insects are huge & seem scary!

Insects live all around us everyday!



Big-headed Ants- soldier with workers

Some insects are so small.....

we barely notice them at all!

But, all insects play a vital role in the "web of life" that keeps life on Earth going!



Blue Dasher Dragonfly

But, all insects play a vital role in the "web of life" that keeps life on Earth going!



Blue Dasher Dragonfly

Insects may delight, startle, or even sting us, but they keep our planet livable!

But, all insects play a vital role in the "web of life" that keeps life on Earth going!



Blue Dasher Dragonfly

Do you know the 5 crucial jobs insects do?

The 5 crucial insect jobs are:



Green Click Beetle

- 1) Providers
- 2) Pollinators
- 3) Decomposers
- 4) Pest Controllers
- 5) Soil Engineers

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Green Click Beetle

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- 5) Soil Engineers

Let's explore each of these important jobs.

Insect Job #1: Providers

Insects are food!

Many animals- spiders, birds, bats, amphibians & fish, eat insects before they are in turn eaten by other predators.

Insects are important links in nearly every food chain on earth!

In some countries, even people eat insects!



Crab Spider
With Sulphur
Butterfly

1) Providers:



Red-faced Warbler with caterpillars

If insects decline, animals that eat them
will suffer population losses!

Insect Job #2: Pollinators

Insects pollinate
flowers.



Skipper
butterfly
on a
Thistle
flower

About 90% of all flowering plants & 75% of our food crops are pollinated primarily by insects!

Many different kinds of insects- bees, butterflies, moths, beetles, flies & even mosquitoes, are important pollinators of plants.

1) Pollinators:



Soldier Fly on a daisy

If insects decline, flowering plants & crops can't reproduce. Humans & animals lose food sources.

Insect Job #3: Decomposers



Female
Dung
Beetle
rolling
cow dung
ball

Special insects, like dung beetles, flies & others, feed on waste materials- dung, dead plants & carrion. They help keep waste from building up!

These insects, with the help of microbes, recycle nutrients back into the ecosystem for reuse by other plants & animals.

1) Decomposers:



Burying Beetles & flies on carrion

If insects decline, waste will build up & make a huge stinky mess! Phew!!

Insect Job #4: Pest Controllers



Lady-bird
Beetle
hunting
aphids
to eat

Predatory insects, like lady-bird beetles, lacewings & assassin bugs, hunt & eat insect pests that damage plants & crops.

By feeding on crop-damaging pests, like aphids & mealy bugs, these insects act like pesticides without poisonous chemicals!

1) Pest Controllers:



Assassin Bug waiting to ambush insects

If these insects decline, pests increase
crop & forest damage & humans increase pesticide use.

Insect Job #5: Soil Engineers



Worker
soil
termites
with white
soldiers

In hot dry climates like Arizona, digging insects, like termites & ants, help transform hard ground into fertile soil.

Digging tunnels loosens & aerates the soil, while adding nutrients & helping soil retain moisture.

1) Soil Engineers:



Red Harvester Ants at their colony entrance

If these insects decline, soil in arid regions becomes barren, crops fail & deserts expand.

Scientists are discovering that many kinds of insects are declining around the world.



Glover's Silk Moth caterpillar

Scientists are discovering that many kinds of insects are declining around the world.



Glover's Silk Moth caterpillar

There seem to be many reasons- like climate change, habitat loss & pesticide use.

If insects disappear, we will lose the 5 critical jobs that they do for the ecosystem.



Painted Grasshopper

If insects disappear, we will lose the 5 critical jobs that they do for the ecosystem.



Painted Grasshopper

That is a worry! Because if insects disappear, then life on the earth as we know it will quickly end!

People need to act now to help insect populations survive & return to healthy levels.



Two-tailed Swallowtail

People need to act now to help insect populations survive & return to healthy levels.



Two-tailed Swallowtail

How can **YOU** & your family help?

1) Be kind to 'bugs'!



Panima
Automeris
Moth

Insect lives matter! Some insects are pests, but most are fascinating animals. Observing them & their behavior is a fun outdoor activity. Treat them with respect!

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Panima
Automeris
Moth

Insect lives matter! Some insects are pests, but most are fascinating animals. Observing them & their behavior is a fun outdoor activity. Treat them with respect!

Don't kill insects outdoors on purpose & be careful not to step on them. In your house, catch insects & put them outside if you can.

2) Reduce (or stop)
pesticide use
at home.



Praying
Mantis

Pesticides are poisons & can be dangerous.
These chemicals kill not only pests, but all
other insects too. They can also harm people,
pets & the environment!

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Praying
Mantis

Pesticides are poisons & can be dangerous. These chemicals kill not only pests, but all other insects too. They can also harm people, pets & the environment!

Use other ways to control pests without pesticides & dangerous chemicals when possible. Try not to use pesticides inside or close around your house.

3) Plant insect & wildlife-friendly landscape



Solitary
Bee in
Globe
Mallow
flower

Local insects are adapted to live with native plants. Attract & support insects in your yard by planting native trees, shrubs, cactus, succulents, grasses & wildflowers.

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Native plants grow well & are adapted to our environment. Besides being insect friendly, they are hardy here, easier to care for & need less water than non-native plants.

4) Plant a pollinator & caterpillar food-plant garden



Blue Damselfly

As part of a native landscape, make a pollinator garden with flowering plants for our insect (& hummingbird!) pollinators. Your whole yard can be a "pollinator garden" with a variety of native flowering plants!

4) Plant a pollinator & caterpillar food-plant garden



Blue Damselfly

As part of a native landscape, make a pollinator garden with flowering plants for our insect (& hummingbird!) pollinators. Your whole yard can be a “pollinator garden” with a variety of native flowering plants!

Butterfly & moths caterpillars often only eat one type of plant. Find out which native plants are food plants & grow some of them in your pollinator garden & yard.

5) *Get involved!*



Glorious
Leaf-chaffer
Scarab
Beetle

Join (or start) a social media site or an insect club with friends at school to learn about & protect insects. Help teach others about how important insects are to life.

5) Get involved!



Glorious
Leaf-chaffer
Scarab
Beetle

Join (or start) a social media site or an insect club with friends at school to learn about & protect insects. Help teach others about how important insects are to life.

Join a conservation organization & volunteer to help with nature & insect projects.

Be "green" at home. Help your family learn how to be more insect & eco-friendly.

So who cares about insects?



Harlequin Bug

So who cares about insects?



Harlequin Bug

You do!

Need some help to find out about insects,
native plants & conservation organizations?

Ask your teacher or parents to help you find these
resource website links on the internet:

Bugguide.Net

"Desert Connections", Pima Co. Public Library

Arizona Native Plant Society

Tucson Audubon Society

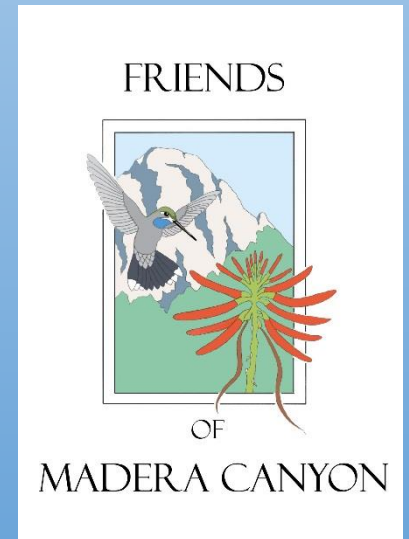
Arizona-Sonora Desert Museum

Southeast Arizona Butterfly Association

Desert Survivors Nursery (Tucson)

Friends of Madera Canyon

Credits:



Story & Photography Doug Moore

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