

# DRAGONFLIES & BUTTERFLIES IN IRAQ



# DRAGONFLIES

**Dragonflies (and Damselflies) are amongst the biggest and most spectacular of insects.**

The adults have the largest eyes of any insect and two pairs of large wings. There are almost **6,000 species** in the world.

They are placed in the biological group '**Odonata**' which means '**tooth jaws**'. They don't actually have teeth but have powerful jaws which they use to catch their food.

Their life history has three distinct stages: **egg**, **larva** and **adult**.

1 EGG



Larvae hatch after 2-5 weeks, depending on temperature. They usually live in water.

Female dragonflies can lay hundreds of eggs during their adult lives. Eggs are laid into plant material or deposited loosely into water.



2 LARVA/  
NYMPH

The larva is an 'eating machine' which grows and moults up to 15 times. Eventually it sheds its outer skin and emerging as an adult.



3

ADULT  
DRAGONFLY

## RECORD BREAKERS

Dragonflies are among the fastest flying insects in the world.

They can move up to 10-15 metres per second (around 36-54 km/hr) with average cruising speed of about 4.5 metres per second (16 km/hr).

Dragonflies can fly backwards, change direction in mid-air and hover for up to a minute.

## WHY ARE THEY IMPORTANT?



Because much of their life is spent in and around water, the presence or absence of some dragonfly species can give us a good idea of the quality of water. They are therefore called **bioindicators**.

They are an important part of the food chain. Eating mosquitos and other harmful insects but also as an important source of food for birds and other animals.

## HOW TO TELL A DRAGONFLY FROM A DAMSELFLY...



DRAGONFLY

Usually larger and hold their wings out to the side when resting.



DAMSELFLY

Usually smaller & fold their wings up over their back when resting.

# BUTTERFLIES

Butterflies are brightly coloured flying insects with two pairs of large wings.

There are thought to be **18,000** and **21,000** different species of butterfly in the world. They are found all over the world except in Antarctic and in many different habitats (e.g. fields, mountains, woodland).

They are placed in the biological group '**Lepidoptera**' which comes from Greek words meaning **scaled** and **wing**. This is because their wings are covered in thousands of tiny overlapping scales. Each scale is one colour but together they form patterns which are unique to each species.



## HOW TO AVOID BEING LUNCH

Butterflies have developed a number of different ways to avoid being eaten:

**Camouflage** - some fold their wings to blend in to the background.

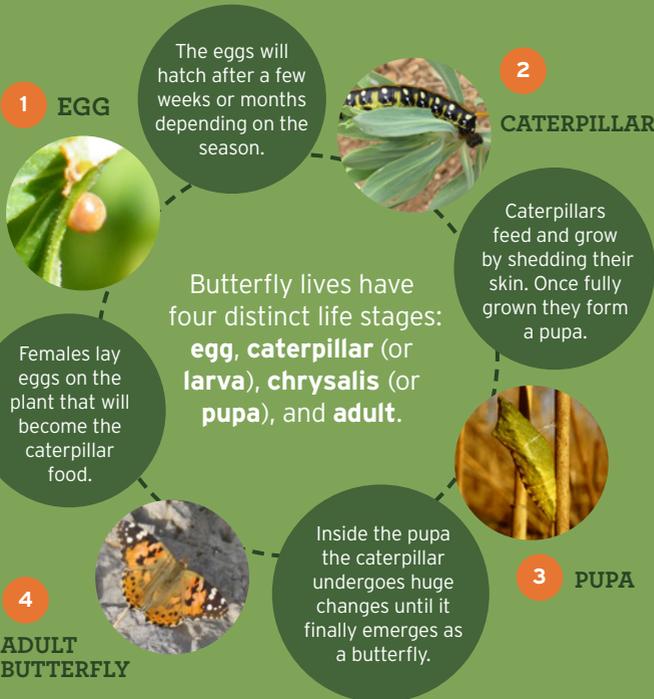
**Poison** - Others are toxic. Their brightly coloured and patterned wings warn predators to avoid them.

**Mimicry** - Some butterflies aren't toxic, but try to look like their poisonous relatives to avoid being eaten.

## WHY ARE THEY IMPORTANT?

Butterflies are very sensitive to environmental change. The presence or absence of different species can therefore be an important indicator of healthy environments and environmental change.

They are an important part of the food chain providing a source of food for many animals.



## THE WEIRD WORLD OF BUTTERFLIES

Butterflies taste using their feet. When they land on a plant sensors in their feet can detect whether their caterpillars will be able to eat it.

Butterflies don't have a mouth; instead they 'suck' food up with a kind of drinking-straw-like apparatus called a proboscis.

## WHAT DO WE KNOW ABOUT THE BUTTERFLIES AND DRAGONFLIES OF IRAQ?

**We know very little about these insect groups in Iraq.**

There are 47 species of dragonfly known in Iraq. Nobody has studied the butterflies but there are probably more than 200 species.

Recent fieldwork in Kurdistan has discovered 4 species of dragonfly which had not been found in Iraq before.

There are probably many other species not yet known in Iraq or even species new to science.



# JOIN THE BIG BUTTERFLY AND DRAGONFLY HUNT

We are trying to find out more about Iraq's butterflies and dragonflies. This will help us understand what species are found in Iraq. It will also help in the conservation of these important species and provide information on the quality of the environment in Iraq.

**To do this we are asking you all to become scientists and join the big hunt.**

## WHAT CAN YOU DO?



Take photos of dragonflies and butterflies (or caterpillars) when you see them.



Make a note of where and when you saw them. The more precisely you can tell us where it was the better.



Send the images and information to us. You can either add them to **Nature Iraq's facebook page** or email them to **thebighunt@natureiraq.org**.



We'll identify what you've seen and add it to our interactive map ([www.iraqdarwin.org/thebighunt](http://www.iraqdarwin.org/thebighunt))



**WHAT MAKES A GOOD PHOTO?**

Sneak up slowly and try and get as close as possible.

We can identify them using the markings on the wings and body.