

INSECTS

By Anna Mazzaro and Janet Powney
Based on their experiences in Bhutan.



- Insects are found in almost any kind of habitat on Earth.
- They come in different shapes, sizes, and colors.



Even though insects are so diverse, they share some common characteristics:

They have segmented bodies and legs covered with an exoskeleton or a hard shell-like covering on the outside of the body.

This moth's exoskeleton has a fuzzy wool-like covering.

- Each body part is made of one or more segments:

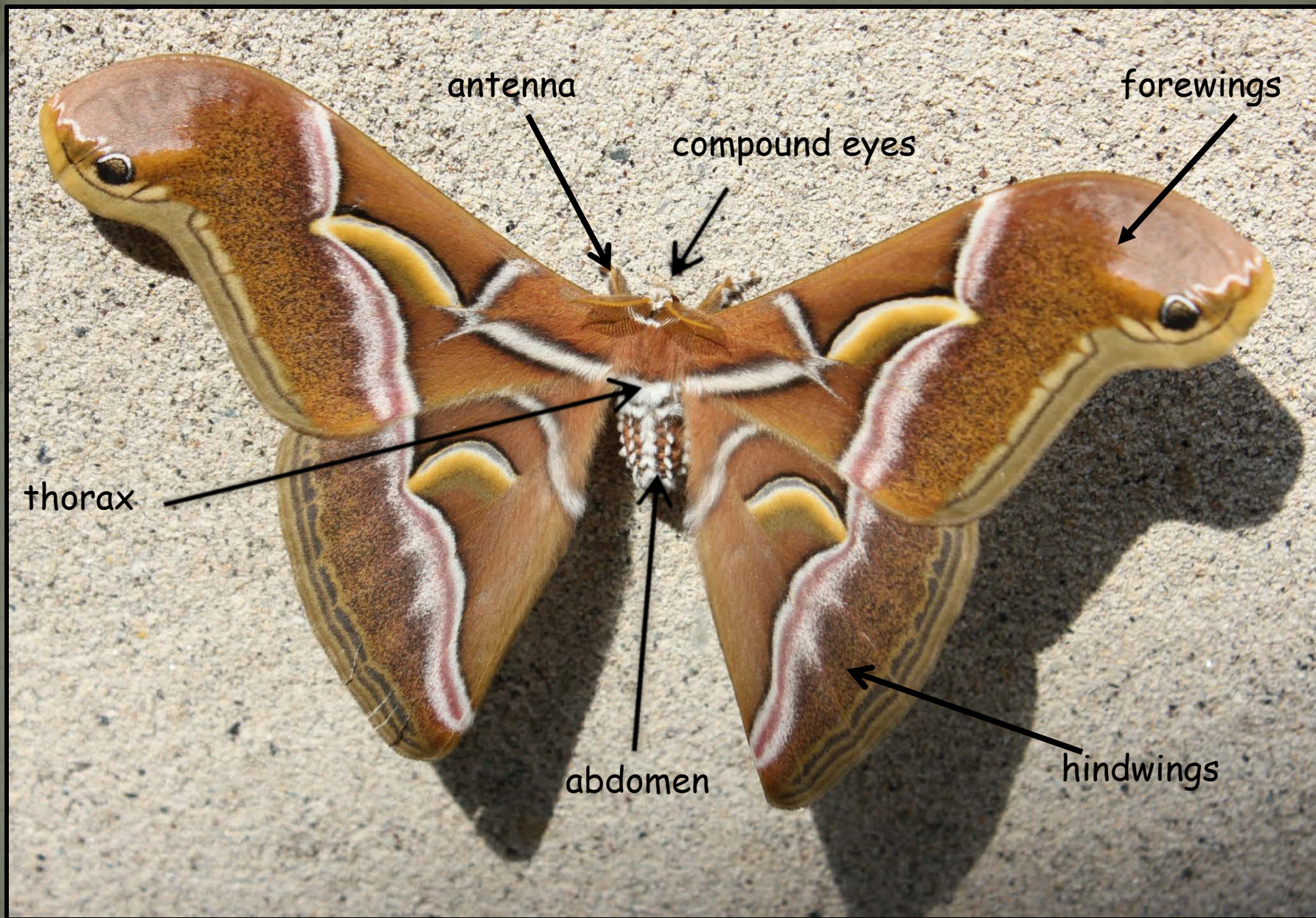
head

thorax

abdomen

- A pair of antennae on the head.
- 2 different kinds of eyes, simple and compound.
- 3 pairs of legs with joints where they bend.
- 2 pairs of wings, or modified wings.







Some insects are able to use camouflage to blend well with their surroundings.

Through its colors and patterns, this moth is able to protect itself from predators.

This is a great way to confuse animals that want to eat it.

What other animal do you know that uses camouflage to blend with its surroundings?



This moth protects itself from predators by pretending to be a leaf. We say that it mimics a leaf, or it is a "leaf-mimic."

Animals have different ways to protect themselves to stay alive.

Some use camouflage, some have bright colors as a way to warn enemies that they do not taste very good, and some mimic or pretend to be something else.



This is how Janet Powney describes this moth in her Bhutan travel journal:

"Sitting on the step of the hut in Gomphu, I see a sleeping leaf moth about 2" long, tawny brown colors and the back of its faded leaf wings is frayed as if the leaf has decayed. On top of its head a fragment flutters like another piece of dead leaf".

Most of
these
pictures
were
taken in
BHUTAN
in the
Himalayas



Where is Bhutan?

Bhutan is located in South Asia, bordered to the east, the west, and the south by India, and to the north by the Republic of China.

We visited Bhutan with a group of good friends and explored some of its unique places and observed many of the animals that live there. These are some of the insects we saw.



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- Even though Bhutan is a small country, it ranks one of the most biodiverse in the world.
 - The topography of the country, with elevations ranging from 150m to 7,000m high, helps create a variety of ecosystems with diverse animals and plants.
 - To learn more about Bhutan, its people, religion, customs, and biodiversity, copy the link below:
 - http://www.conservenature.org/learn_about_wildlife/biodiversity_in_bhutan/biodiversity.htm



We all enjoyed seeing the many beautiful and mysterious insects that were attracted to the lights in our camp in the rainforest of southern Bhutan.

We learned that the group that we call Insects is by far the largest group of animals in the world.

But, according to scientists, there are many that have not been discovered yet.

What do you think about that?



We really like this picture, did you notice how hairy the legs are? This is one way to differentiate moths from butterflies. Moths have hairy legs and antennae while butterflies do not.





Do you observe the legs and antennae of these butterflies? They are not hairy like the ones of moths.

These yellow butterflies are sucking minerals from the wet soil. Like us, they need minerals in their diet.



Moth or Butterfly?





Not all the insects were moths- this is a strange one!



Different insects we saw on our trip.



No...don't worry,
this is not a
monster, just a
strange looking
moth.





This moth had a bite taken out of her right hind-wing, maybe by a bat! Butterflies often have V-shaped beak marks on their wings from when a bird misses catching it.



Picture taken by Janet Powney



Picture taken by Janet Powney

What a pretty moth! It shows us its front and hind wings, as well as its handsome colors and patterns.





Pictures by Janet Powney

We almost missed
this moth, because
it looks like the
bark of a tree.



Picture by Janet Powney



Picture taken by Janet Powney



Photo by Janet Powney



What an interesting beetle-
Its iridescent wing covers
are very attractive.



References

- www.donnabrunet.com/pages/insects/howtorecognizeinsects.pdf
- http://www.conservenature.org/learn_about_wildlife/biodiversity_in_bhutan/biodiversity.htm