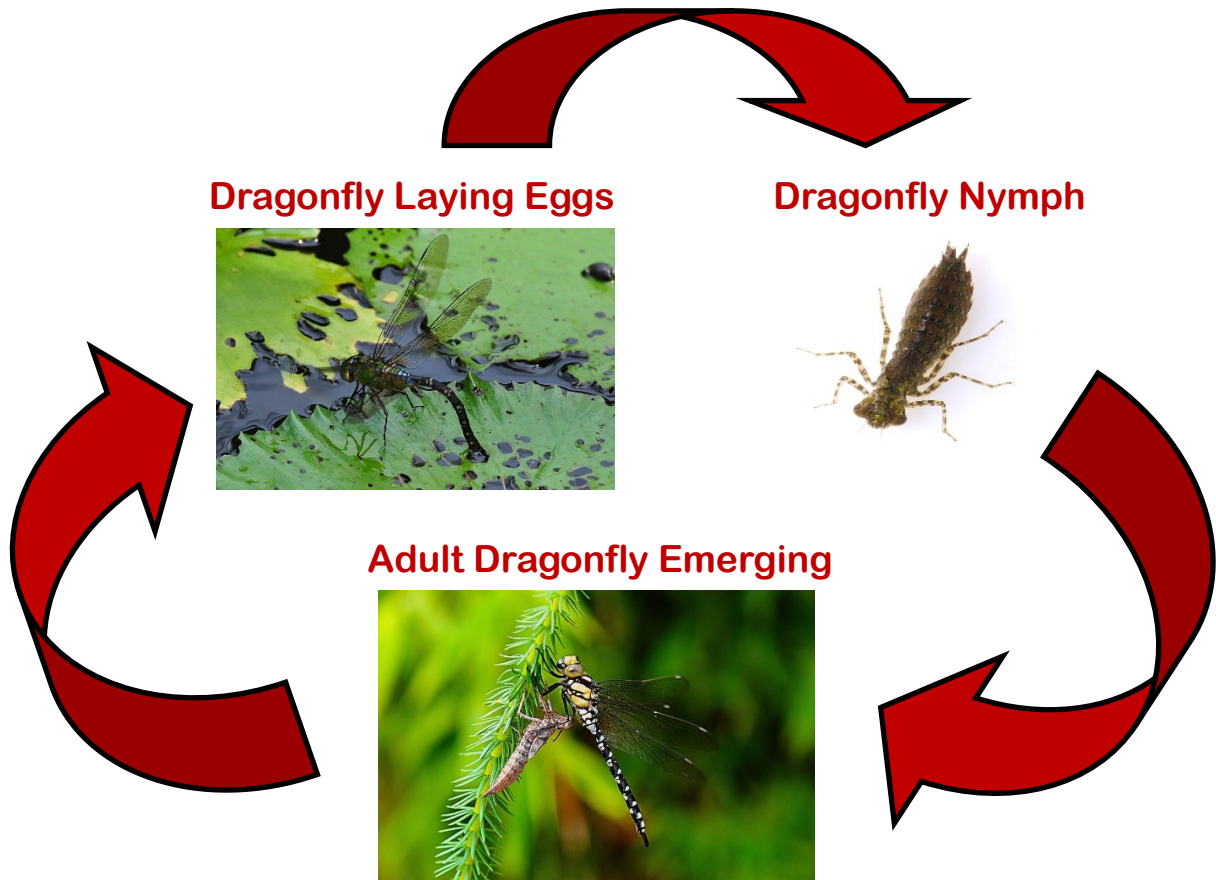


# Dragonfly Life Cycle – Incomplete Metamorphosis



**Eggs** – Adult dragonflies lay their eggs on aquatic plants or in still water. Eggs hatch in a few days to a few weeks. The nymph comes out of the eggs and then lives underwater.

**Nymph** – Once the eggs hatch, the dragonfly is in its larval or nymph stage. They spend two to three years in this stage and live underwater growing and eating small bugs. At the end of this stage, they leave the water and hatch out of their own exoskeleton, turning into an adult.

**Adult Dragonfly** – Dragonflies live up to four months in the adult stage, feeding on mosquitoes and flies, which they catch while in flight. At the end of their life, they mate and lay eggs, starting the cycle over again.

## Dragonfly Laying Eggs



## Eggs

Adult dragonflies lay their eggs on aquatic plants or in still water. Eggs hatch in a few days to a few weeks. The nymph hatches out of the eggs and lives underwater.

# Dragonfly Nymph



## Nymph

Once the eggs hatch, the dragonfly is in its larval or nymph stage. They spend two to three years in this stage and live underwater growing and eating small bugs. At the end of this stage, they leave the water and hatch out of their own exoskeleton, turning into an adult.

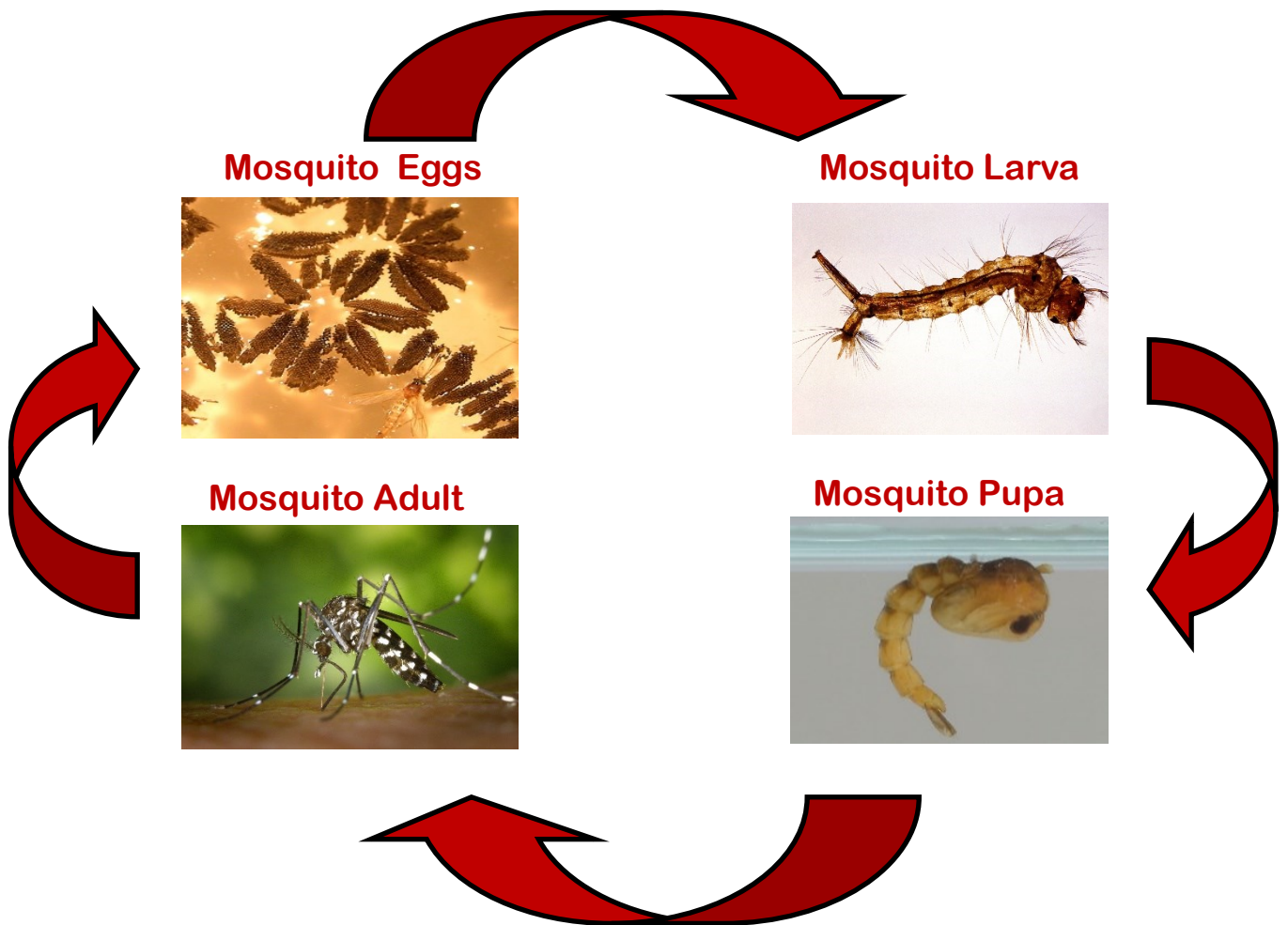
## Adult Dragonfly Emerging



## Adult Dragonfly

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# Mosquito Life Cycle – Complete Metamorphosis



**Eggs** – Mosquitoes usually lay eggs in floating groups called rafts. Eggs are laid in still water and hatch within a few days into underwater larvae.

**Larva** – Once the eggs hatch, mosquitoes start their larval stage. Larvae hang upside down on the water's surface and they breathe through a tube on their bottom. They spend one to two weeks growing and eating small plants, like algae. At the end of this stage, larva molt into a pupa.

**Pupa** – The pupa stage lasts a few days and pupa stay close to the surface of the water to breathe, but do not eat. If a predator approaches, they can roll themselves into deeper water. At the end of this stage, pupa break open and an adult mosquito comes out.

**Adult Mosquito** – Mosquitoes mate within a few days of becoming adults because they die quickly during this stage. Males feed on plant nectar and live for about a week, while female mosquitoes feed on blood and can live for around five months. Females are the only ones that bite people because they need the blood for their eggs. Once they lay eggs this starts the cycle over again.

## Mosquito Eggs



## Eggs

**Mosquitoes usually lay eggs in floating groups called rafts. Eggs are laid in still water and hatch within a few days into underwater larvae.**

## Mosquito Larva



## Larva

Once the eggs hatch, mosquitoes start their larval stage. Larvae hang upside down on the water's surface and they breathe through a tube on their bottom. They spend one to two weeks growing and eating small plants, like algae. At the end of this stage, larva molt into a pupa.

## Mosquito Pupa



## Pupa

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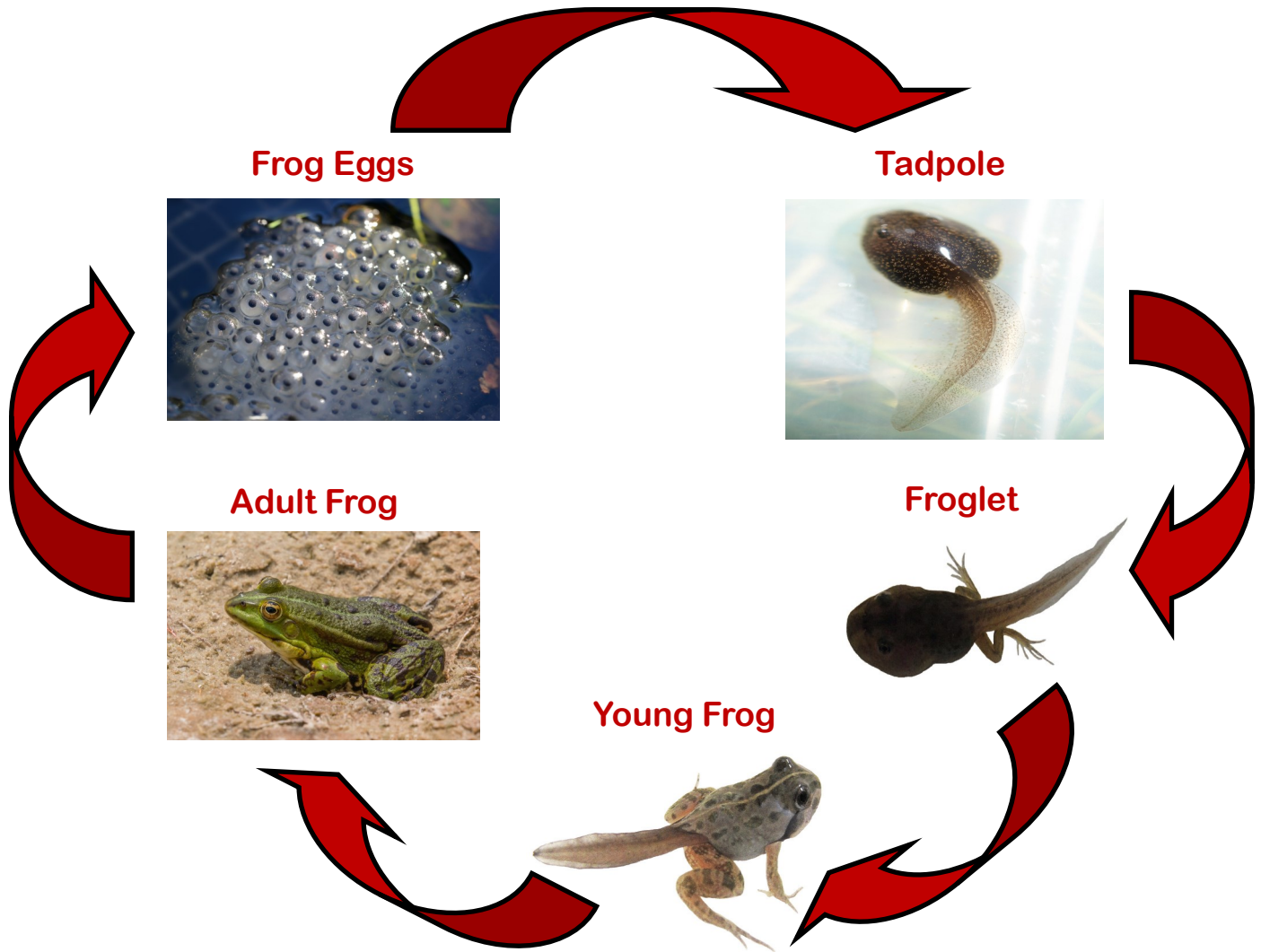
## Adult Mosquito



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# Frog Life Cycle – Complete Metamorphosis



**Eggs** – Frogs will lay hundreds of eggs at a time and the eggs will be found in clusters together underwater. In a couple of weeks, the eggs will hatch into tadpoles.

**Tadpole** – At this stage, tadpoles live underwater and use gills to breathe. They eat algae and other plants for a few weeks and slowly grow legs.

**Froglet** – In this stage, froglets develop back legs and lungs for their life as an adult frog. For the next several weeks, froglets can hop and swim in the water.

**Young Frog** – A young frog will develop front legs. Its tail will begin to get smaller and eventually disappear. The young frog will jump out of the water and live on land during this stage. It takes up to four years for young frogs to turn into adults.

**Adult Frog** – After young frogs develop front legs and their tails disappear, they become adult frogs. They will eat only insects as adults and lay eggs starting their life cycle over again.

## Frog Eggs



## Eggs

Frogs will lay hundreds of eggs at a time and the eggs will be found in clusters together underwater. In a couple of weeks, the eggs will hatch into tadpoles.

## Tadpole



## Tadpole

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## Froglet



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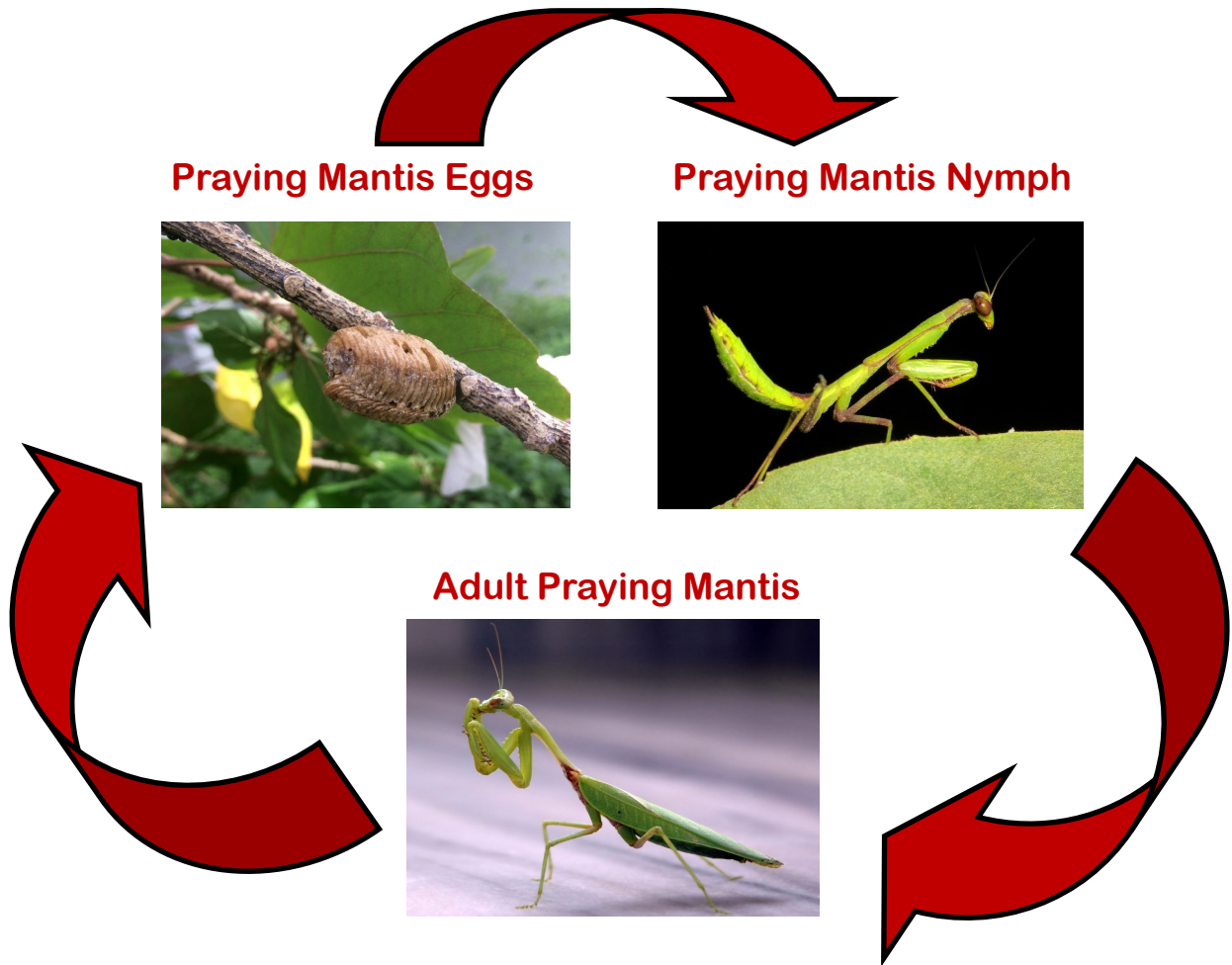
## Adult Frog



## Adult Frog

After young frogs develop front legs and their tails disappear, they become adult frogs. They will eat only insects as adults and lay eggs starting their life cycle over again.

# Praying Mantis – Incomplete Metamorphosis



**Eggs** – Adult praying mantis lay hundreds of eggs on leaves or stems. The liquid around the eggs hardens to protect the eggs from predators. It takes up to six weeks for the eggs to hatch into nymphs.

**Nymph** – This stage will last a couple of months. Praying mantis nymphs eat small bugs like fruit flies. As nymphs grow, they will molt many times and during the sixth time the praying mantis will emerge from its exoskeleton as an adult.

**Adult Praying Mantis** – Adults are larger and stronger than nymphs but look almost the same. They can eat larger animals like lizards, mice and frogs. Adults will live for a few months during which they lay eggs starting the life cycle all over again.



## Praying Mantis Eggs



## Eggs

Adult praying mantis lay hundreds of eggs on leaves or stems. The liquid around the eggs hardens to protect the eggs from predators. It takes up to six weeks for the eggs to hatch into nymphs.

# Praying Mantis Nymph



## Nymph

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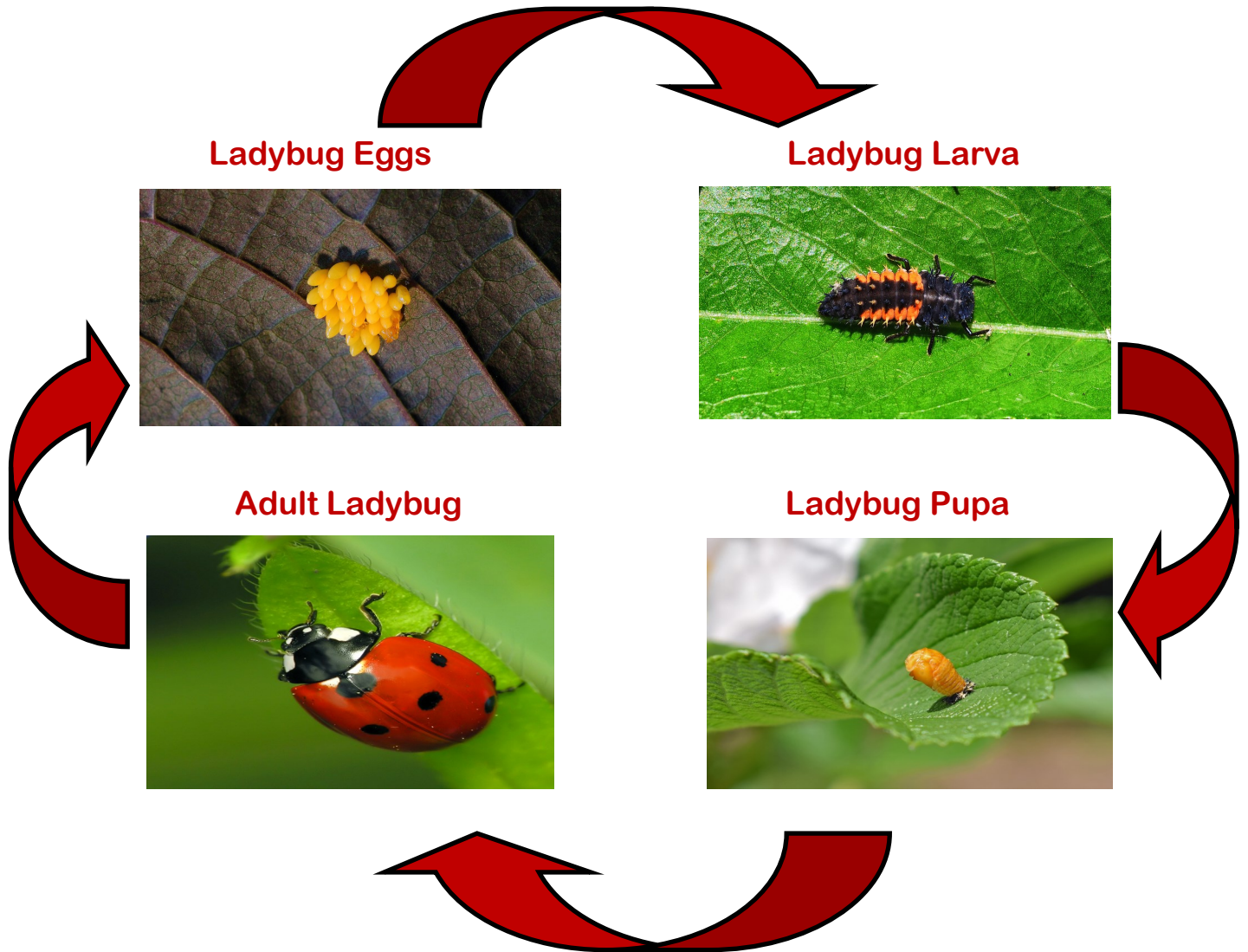
## Adult Praying Mantis



## Adult Praying Mantis

Adults are larger and stronger than nymphs but look almost the same. They can eat larger animals like lizards, mice, and frogs. Adults will live for a few months during which they lay eggs starting the life cycle all over again.

# Ladybug – Complete Metamorphosis



**Eggs** - Female ladybugs lay up to thirty eggs on the bottom of leaves. Eggs hatch in one week. Larva begin the process of hatching by biting a hole in the egg.

**Larva** - After the eggs hatch, larva come out and begin looking for tiny bugs to eat. They molt as they grow and will stay in this stage for up to 25 days. Once larvae are big enough, they attach to a leaf and slowly begin to harden into a pupa.

**Pupa** - In this stage, pupa are attached to the leaves and do not move. In a week the skin of the pupa will split open to reveal an adult ladybug.

**Adult** - Adult ladybugs can live for up to three years. As adults they also eat tiny bugs, but can consume more than when they were in the larva stage. Ladybugs spend their adult lives mating and laying eggs. They can lay up to 1,500 eggs in the first couple weeks and then continue laying eggs starting the life cycle all over again.

# Ladybug Eggs



## Eggs

**Female ladybugs lay up to thirty eggs on the bottom of leaves. Eggs hatch in one week. Larva begin the process of hatching by biting a hole in the egg.**

## Ladybug Larva



## Larva

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## Ladybug Pupa



## Pupa

In this stage, pupa are attached to the leaves and do not move. In a week the skin of the pupa will split open to reveal an adult ladybug.

## Adult Ladybug

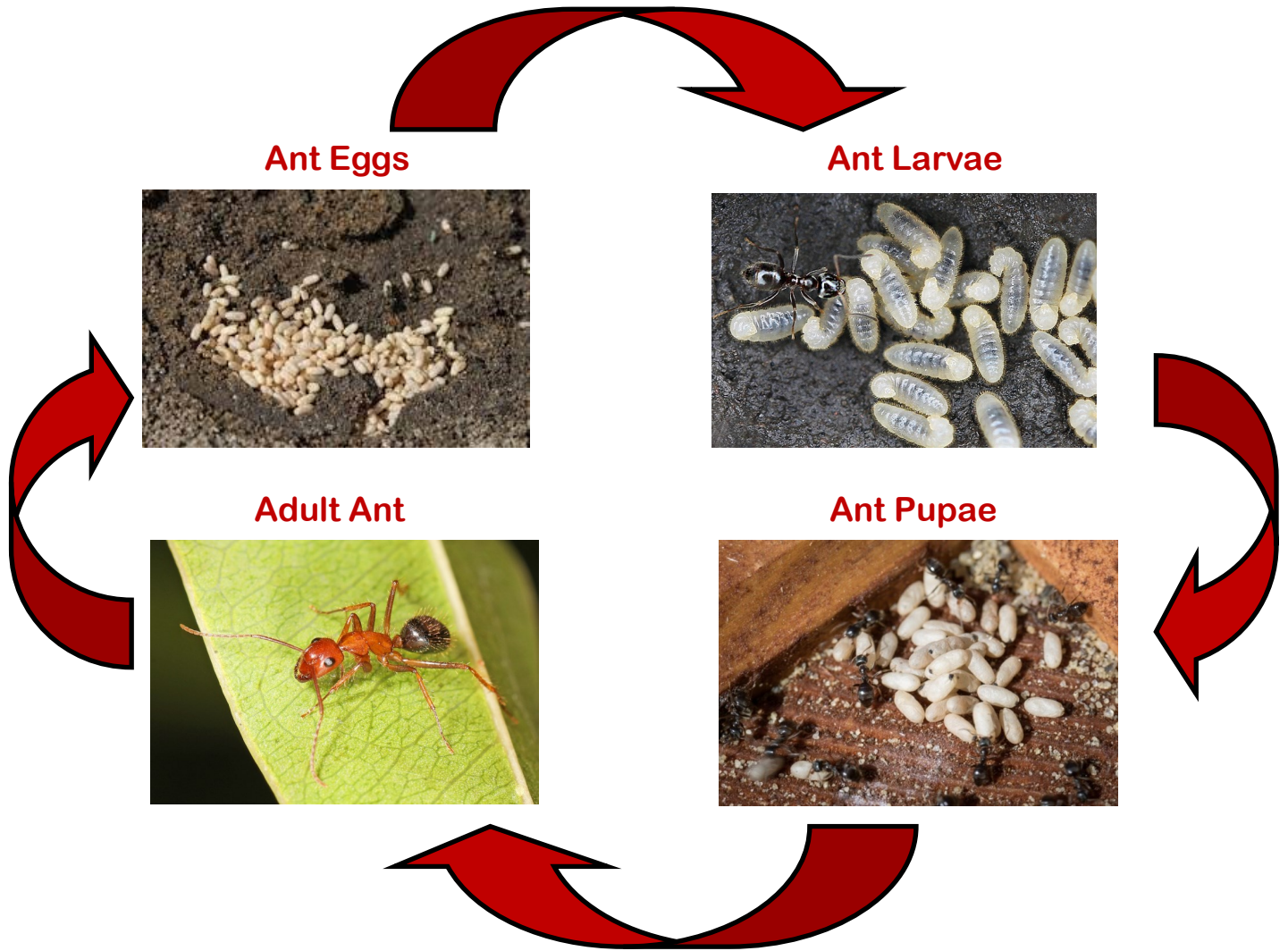


## Adult

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# Ant – Complete Metamorphosis



**Eggs** – The queen ant is the only one in a colony that will lay eggs. She can lay millions of eggs throughout her lifetime. After the queen lays her tiny oval shaped eggs, they will hatch in about a week.

**Larva** – As larva, ants do not have any eyes or legs, so adult ants will feed them lots of food to grow during this time. Larva will molt many times over thirty days and once they are big enough, they will slowly turn into pupae.

**Pupa** – Depending on the ant species, some will form a cocoon around themselves during the pupa stage and others will stay exposed. This stage can last up to a month and pupae will sleep during this time.

**Adult** – Ants will come out of the pupa stage as adults. Some adults will become worker ants where they collect food for the colony and others mate with the queen. Rarely, a pupa will hatch into a new queen. Queen ants can live for up to 20 years, mating and laying eggs starting the cycle all over again.



## Eggs

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## Ant Larvae



## Larva

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## Ant Pupae



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## Adult Ant

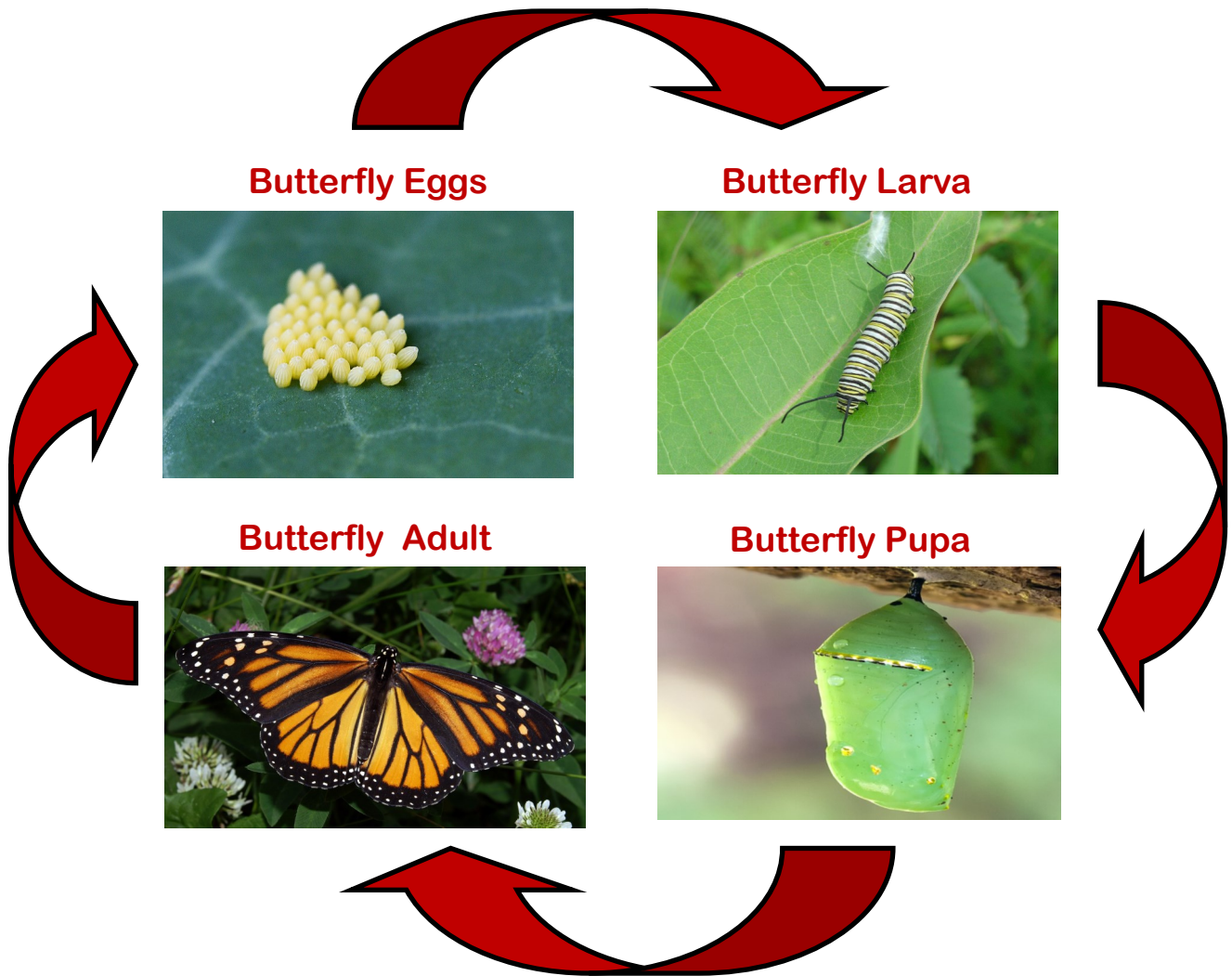


## Adult

**Ants will come out of the pupa stage as adults.**

**Some adults will become worker ants where they collect food for the colony and others will mate with the queen. Rarely, a pupa will hatch into a new queen. Queen ants can live for up to 20 years, mating, and laying eggs starting the cycle all over again.**

# Butterfly – Complete Metamorphosis



**Eggs** – Female butterflies will lay a cluster of eggs on the leaves of plants. The eggs will hatch in a week and tiny larva will appear.

**Larva** – Butterfly larvae are also known as caterpillars and as soon as they hatch they will begin eating leaves. This stage lasts up to five weeks and larvae spend most of this time eating and growing.

**Pupa** – Once caterpillars are large enough, they will attach themselves to a branch or stem and slowly form a pupa or chrysalis. In the beginning it will look like a resting caterpillar and over time a covering around the larva will form. Most pupa will be in this stage for a few weeks, but some can spend years as a pupa.

**Adult** – Adult butterflies will break out of the pupa with folded wings. After a few hours the wings will grow to their full size, dry in the sun, and butterflies will fly off. Adult butterflies will live for around three weeks where they will search for a mate and lay eggs starting the life cycle all over again.

# Butterfly Eggs



## Eggs

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## Butterfly Larva



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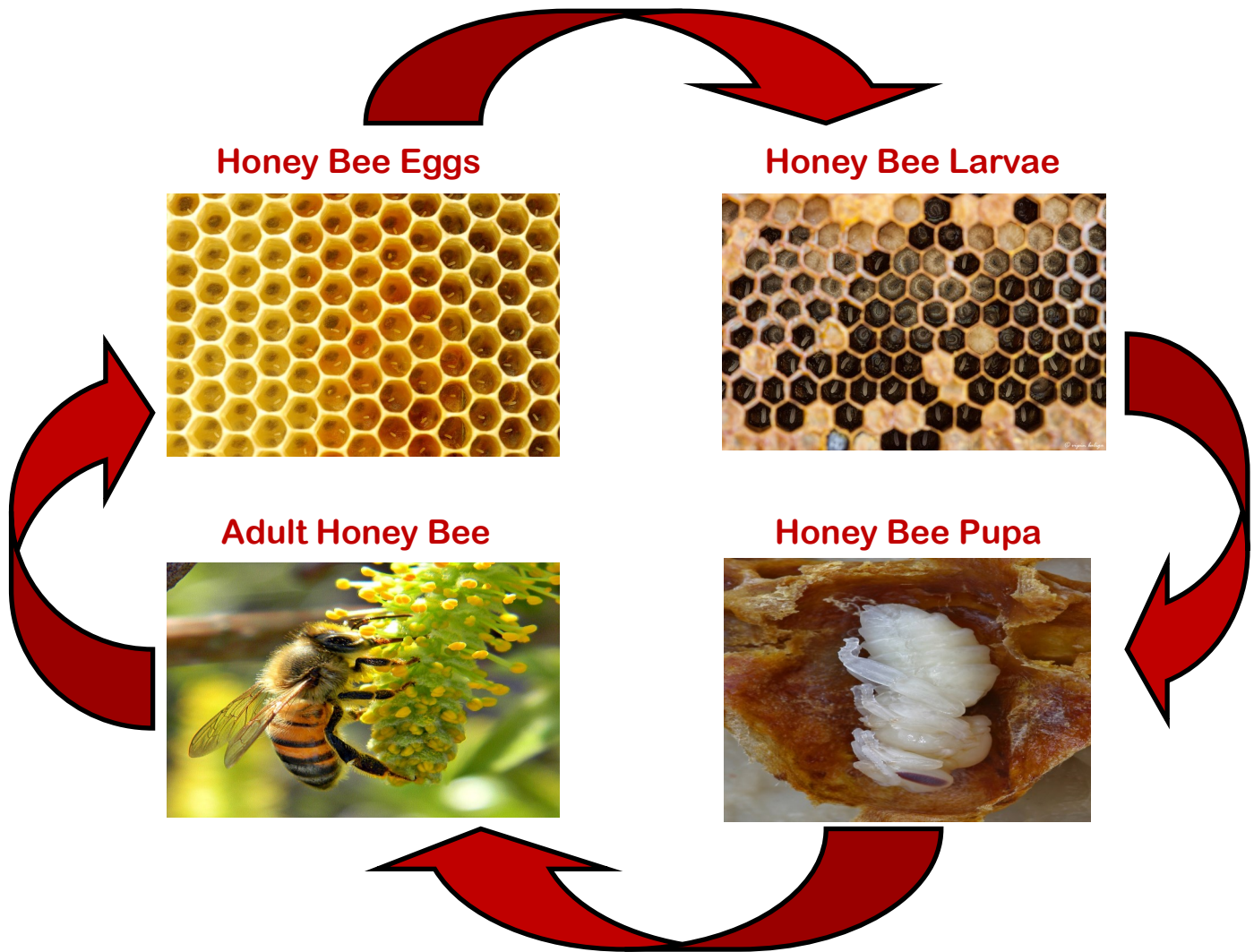
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# Honey Bee – Complete Metamorphosis



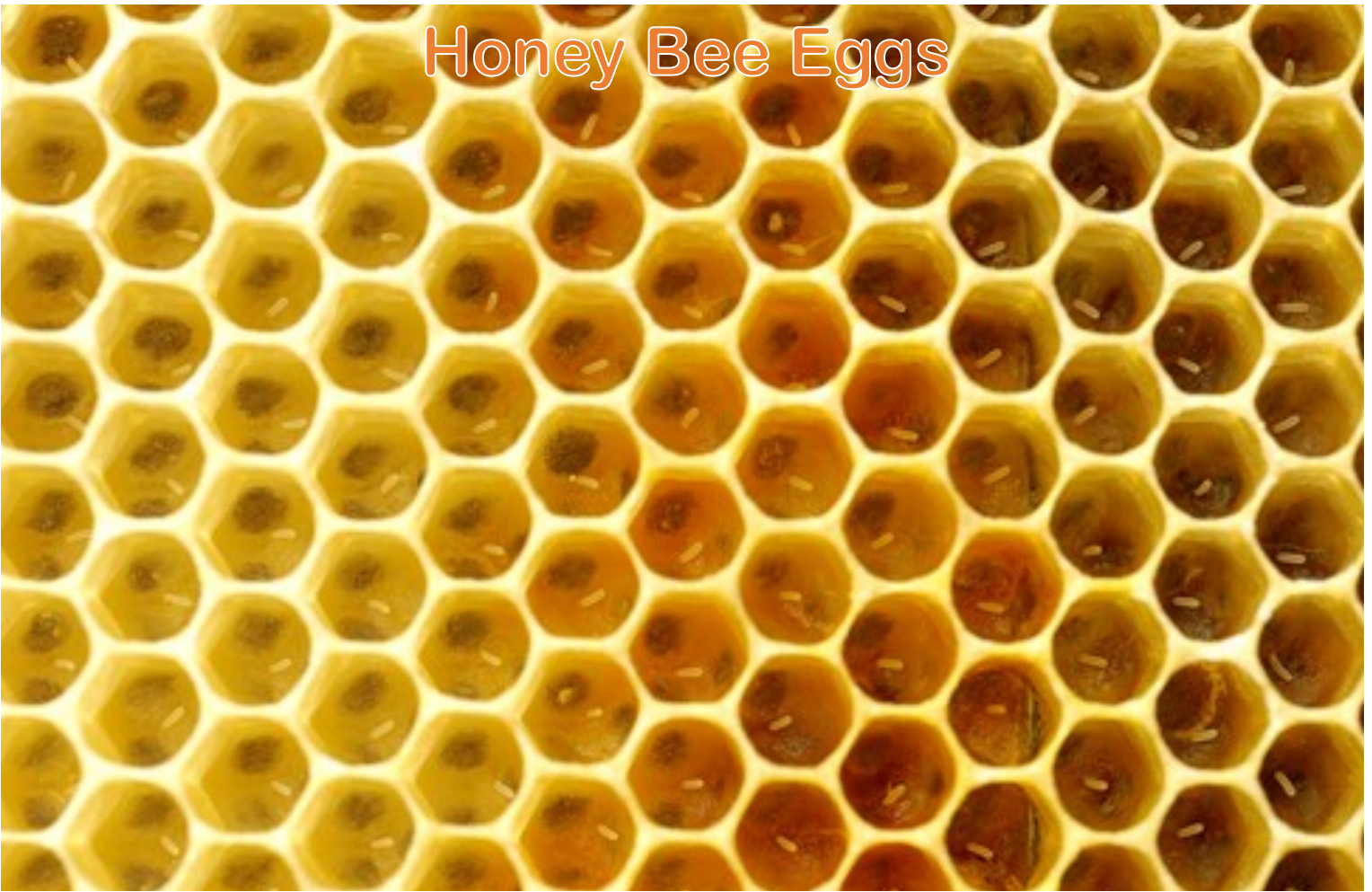
**Eggs** – Queen honey bees will lay eggs in egg cells in the bee hive. The eggs are tiny and depending where each egg is placed it will become a male drone, female worker or rarely a new queen bee. After three days the eggs hatch into larva.

**Larva** – In the larval stage, they still live in the egg cell, but are larger and have no legs or eyes. Worker bees will feed them honey and pollen. As larva grow, they molt many times and by the sixth day worker bees will cover the larva with wax and this begins the pupa stage.

**Pupa** – In this stage, pupa will create a cocoon around themselves. Over the course of 8 to 14 days pupa will develop legs, wings, a head, thorax and abdomen. At the end of this period, the pupa will bite through the wax casing that surrounds it and come out as an adult.

**Adult** – Adult bees' daily activities are dependent upon if they hatched into worker, drone, or queen bees. Worker bees will find food for the colony and live for up to five months. Drone bees will mate with the queen bee and live for up to seven weeks. Queen bees can live for years where they lay eggs for the colony throughout their lifetime, starting the life cycle all over again.

# Honey Bee Eggs



## Eggs

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# Honey Bee Larvae



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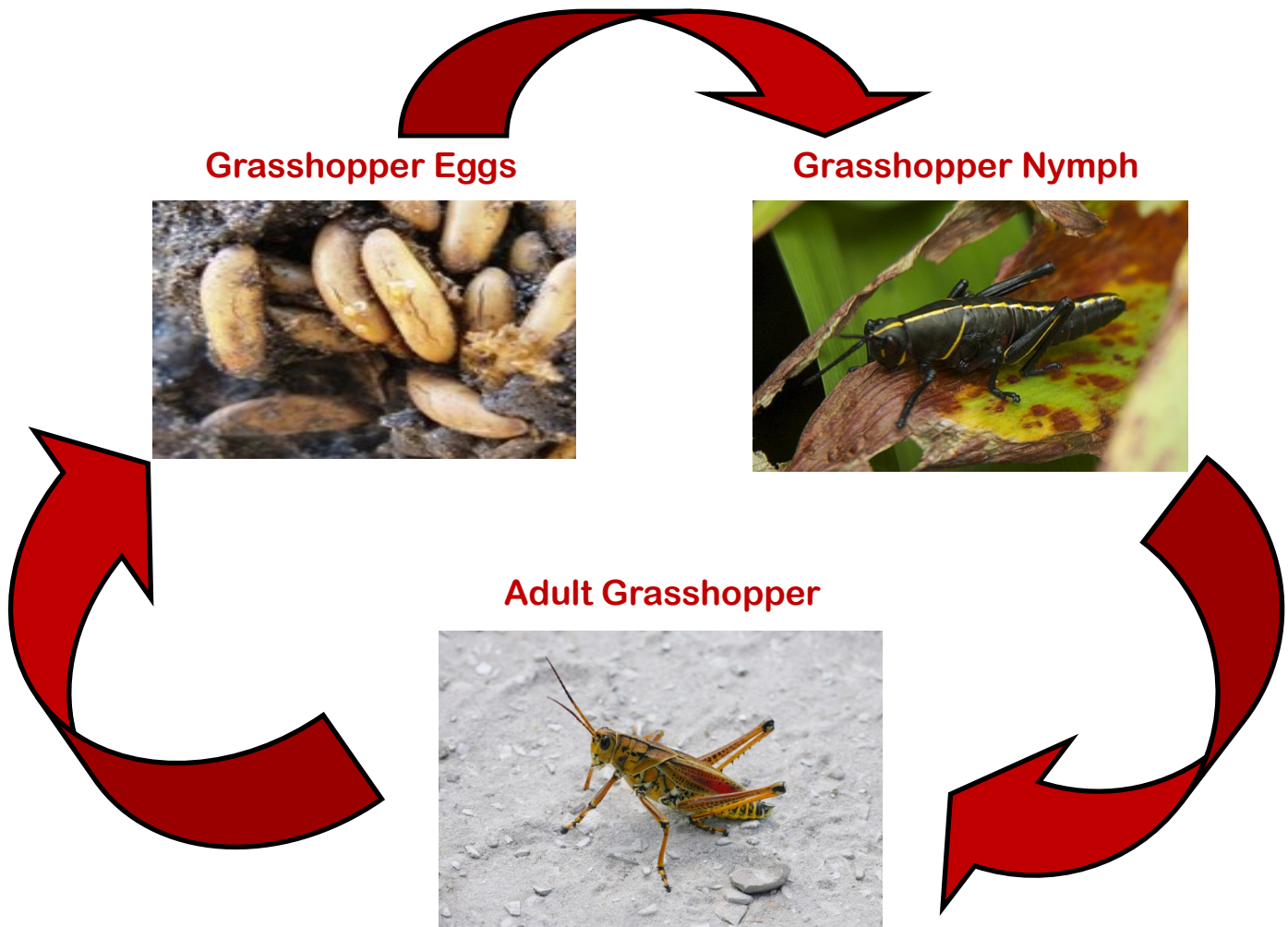
## Adult Honey Bee



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# Lubber Grasshopper – Incomplete Metamorphosis



**Eggs** - Lubbers deposit about 25 eggs in the ground during the summer. The eggs stay in the ground until the spring when they begin to hatch and crawl up out of the soil to find food.

**Nymph** – The wingless lubber nymphs crawl up out of the soil in groups and search for food. They are black with a yellow, orange, or red stripe down their back. As the nymphs grow, they will molt many times and usually during the fifth time, wing buds have developed and the grasshopper will molt into its adult stage.

**Adult** – Adult lubber grasshoppers are bright yellow and red and have wings, but cannot fly. They travel by crawling or jumping short distances. They eat the leaves of many types of plants. Once a year in the winter the females will lay eggs and start the life cycle all over again.



## Lubber Grasshopper Eggs



## Eggs

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# Lubber Grasshopper Nymph



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