

# Wildlife Express!

Volume 26/Issue 9

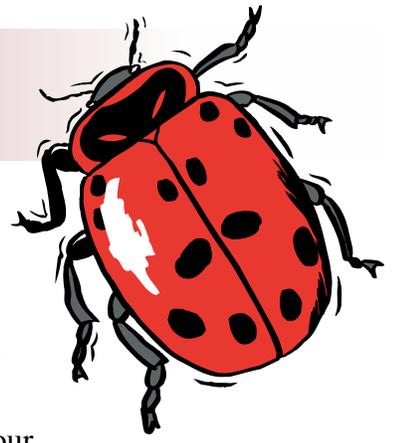
Ladybugs

May 2013

## Lovely Ladybugs



# Lovely Ladybugs



Who doesn't love a ladybug? Their small size, bright colors and spots make them one of the most loved insects.

Ladybugs are a type of beetle. Worldwide there are about 5,000 different species of lady beetles. In North America, there are about 400 different kinds. We usually think of ladybugs having a red color with black spots, but they come in many different colors – red, orange, yellow, black, brown, gray and pink. They may have spots, stripes and no markings at all.

Have you even wondered how the ladybug got its name? There are many stories behind the name, but one that is most common dates back to the Middle Ages. In Europe, crops were being eaten by insect pests. The farmers prayed to the Virgin Mary for help. Soon ladybugs arrived, ate the pests, and saved the crops. The farmers called the striking red beetles “Beetles of Our Lady” for the Virgin Mary. The name eventually was changed to lady beetles and ladybird beetles. In America, they are usually called ladybugs.

Ladybugs are a gardener's best friend. They eat insects that damage plants. They really love to eat aphids. Aphids are small insects that suck the juices from plants. Ladybugs may eat 50 to 60 aphids in one day. That adds up to about 5,000 aphids eaten during a ladybug's lifespan!



Ladybugs like to eat insects, but their biggest predator happens to be birds. They do have some ways to protect themselves from predators. Their

colors of red, yellow and orange warn predators that they taste awful! They also smell awful. Have you ever gotten a yellow liquid on your hand while holding a ladybug? It doesn't smell very good. This liquid is actually the ladybug's blood. When scared, ladybugs ooze blood from the joints in their legs. The stinky smell helps to stop a predator from enjoying lunch! Ladybugs may even play dead. They pull in their heads like a turtle and bend up their legs. This doesn't look very appetizing to a predator.

Ladybugs are good fliers, but they can be a little clumsy. Like all beetles, ladybugs have two sets of wings. The outer wings, called elytra (EL-i-tra), are hard. These wings protect the flight wings that look a bit like a fly's wings. To fly, ladybugs hold their elytra up. When flying, ladybugs beat their wings 85 times a second. That's pretty fast!

After a summer of eating aphids, ladybugs hibernate for the winter. Hundreds of ladybugs gather together to wait out the cold winter under logs, leaves or rocks. Sometimes they crawl into the cracks of houses. Ladybugs have an interesting way of letting other ladybugs know that they have found a good hibernating site. They emit chemicals called pheromones. Pheromones are powerful scents. A ladybug can detect the scent of another ladybug when it is  $\frac{1}{4}$  a mile away! The scent doesn't go away easily. The scent may last for five years! This lets other generations know where to ride out a hard winter.

Look for ladybugs this summer in your yard or neighborhood park. These colorful beetles are not only prowling predators; they are also said to bring good luck.

# What's an Insect?

**T**hey are on the ground, in trees, in soil and in your house. They make up about 80 percent of all known animal species on Earth. Insects are all around us.

Sometimes any small creepy crawly is called an insect, but to be an insect an animal must meet three important rules. They must have three main body parts – the head, thorax (THOR-aks) and abdomen (AB-do-men), six legs and two antennae (an-TEN-ee).

The head of an insect has the eyes, antennae and mouthparts on it. Insects have two large compound eyes. Compound eyes are faceted (FAS-et-ed). They have more than one lens or surface. Compound eyes look a bit like a honeycomb. Insects may also have up to three simple eyes. You have simple eyes. A simple eye has one surface or facet. Without moving their heads, many insects can see in a full circle around their bodies.

The thorax, or middle part of an insect, is where the wings and legs are found. All adult insects have legs, but not all insects have wings. Ladybugs have four wings.

Most insects breathe through tiny holes on their abdomens called spiracles (SPIR-i-kels). Insects that

live in water would drown if they had spiracles, so some water insects breathe with gills just like fish. Other water insects have a sort of snorkel they stick above the water to breathe air.

Insects have an exoskeleton (ek-so-SKEL-et-en). An exoskeleton is a hard fingernail-like covering on the outside of the insect's body. The exoskeleton is divided into separate pieces called plates. The plates fit together like a puzzle and are held together with soft flexible membranes. The membranes work like rubber bands. They allow the insect to move its body. The exoskeleton can only flex. As insects grow, their exoskeletons become too small. Insects need to shed their exoskeletons, just like snakes shed their skins.

Insects come in all shapes and sizes. Hairy-winged beetles and fairyflies are some of the smallest insects. They can fit through the eye of a needle! The longest insect is a 13-inch long walkingstick found in Malaysia. Atlas moths in India have the largest wings at 12 inches across. Goliath beetles found in Africa are the bulkiest and heaviest. They can be as big as a baseball. Wow, what diversity. Insects sure are amazing animals!

## Ladybug Legends

- In France, people believed that if a ladybug landed on you, any sickness you had would fly away with the ladybug when it flew away from you.
- If the spots on a ladybug are more than seven, it is a sign of famine. If the spots are less than seven, it is a sign of a good harvest.
- In Belgium, people believed that if a ladybug crawled across a girl's hand, she would be married within the year.
- People in Switzerland told their children that ladybugs delivered babies to their parents.
- In some Asian cultures, it is believed that ladybugs can understand human language and that ladybugs have been blessed by God.
- In Brussels, the number of black spots on a ladybug told a person how many children they would have.
- According to Norse legend, ladybugs came to earth riding on a bolt of lightning.
- In the 1800s, some doctors used ladybugs to treat measles.
- During Pioneer times, if a family found a ladybug in their cabin, it was a "Good Omen."
- Some people believe that if you catch a ladybug in your house, count the number of spots you see. That is how many dollars you will soon find.

# Nature's Transformers

Photo Courtesy James T. Johnson  
© California Academy of Sciences

Photos Courtesy Dr. Janos Bodor



**EGGS**



**LARVA**



**PUPA**



**ADULT**

Can you think of an animal that changes the shape of its body as it grows? How about a butterfly? They change from fuzzy, crawling insects that chew their food to beautiful, flying insects that drink their food. What a change! They go through a metamorphosis (met-a-MOR-fo-sis).

There are many kinds of metamorphosis in the insect world. There are insects that make big changes, like the butterfly. This is called complete metamorphosis. There are other insects that don't seem to change at all. This is called simple metamorphosis. Insects with simple metamorphosis have three life stages – egg, nymph and adult.

Insects that have complete metamorphosis have four stages in their life cycle – egg, larva, pupa and adult. Ladybugs are in this group. Ladybugs lay their eggs on the underside of leaves. A female ladybug lays about 1,000 eggs during her lifetime. The eggs hatch in three to 10 days. It all depends on temperature and moisture. Larvae don't look anything at all like adult ladybugs. They look a bit like small, spiky alligators! Sometimes people kill ladybug larvae thinking they are "bad" insects. Don't kill them! Remember, they are eating other insect pests! The larvae eat and

eat and grow. They often are larger than adult ladybugs. In about 10 to 14 days, they make a pupa. The pupa looks like an orange sack with tiger stripes. In seven to 14 days, the adult ladybug crawls out of the pupa. When a ladybug emerges from the pupa it is a light color and has no spots. Its color will deepen and the spots will show after the wings dry and get hard.

Metamorphosis is amazing to see. If you find a pupa, leave it outside, but look at it every day. You may be able to see the insect changing and developing inside. It is fun to see what will emerge!



# The Winners Are!

**Back in December, we asked our readers to send in their poems and artwork about an Idaho animal. Below are our winners' entries. Congratulations to Gillian, Mickell and Daisy! We hope that you enjoy your prizes. Keep up the good work!**

## A Coyote Staring At Me

A coyote I see staring at me.  
Oh how different he seems to be  
Than most animals I usually see.  
Long and skinny,  
Hard to see,  
Fast as can be.  
A coyote I see staring at me.  
Why, I can not say,  
All I know is a coyote's staring at me.

- Mickell Hope Weston



# Grizzly Bears

Grizzly bears have such a large hump  
and big paws that go thump, thump, thump.

Searching for the biggest fish  
in the water going swish, swish, swish.

Grizzly bears are omnivores  
which means they are both herbivores and carnivores.

In the spring, summer, and fall they must eat, eat, eat  
for all winter they must sleep.

Grizzly bears are not just brown,  
in different colors can they be found.

GILLIAN BUTTS



# White Tailed Deer

By Daisy Parthey

I know you are shy in all,  
but your so intresting to watch,  
Prancing through the United States,  
Canada, and Mexico.

When I see you in my backyard,  
I want to go out and feed you.  
"Would you like acorns or twigs?"  
White Tailed Deer you are

Great!



# Be Outside:

## Outsmarting the Fish

In this issue of Wildlife Express, you learned about an insect that really helps us. Actually, many insects are helpful. Insects like ladybugs and praying mantids eat our garden and crop pests. Other insects are important decomposers. Insects pollinate our food plants. Insects can even help you become a better fisherman! Wait, a better fisherman? You bet!

Many insects are important fish food. Paying attention to the insects near your favorite fishing spot can help you catch more fish. When you arrive at your fishing spot, spend some time carefully watching for insects. Check out what is flying over and sitting on the water. See if you can find insects in the shrubs along the bank. Turn over some rocks in the water to spot insect larvae. You should also think about what you do not see. That can tell you if the fish are feeding on underwater nymphs instead of flying adult insects.

Once you have identified some insects, take a look in your tackle box. Does anything match the insects you see? Try to get as close to the same size and pattern as possible. Fly fishermen often have large collections of flies to choose from. Many of these flies look just like insects and could trick a hungry trout!

If you enjoy fly fishing, you might want to try tying your own flies. This is where your observations of insects can really come in handy. Take a trip to a fly shop. You will be amazed at the variety of different flies. They look like mayflies, grasshoppers, midges, stoneflies, caddis flies, bees . . . the list goes on and on. Who knew that becoming an insect expert could also help you become an expert angler?



**BE OUTSIDE**  
IDAHO CHILDREN IN NATURE



## WILDLIFE EXPRESS

Volume 26

Issue 9

Ladybugs

May 2013

Wildlife Express is published nine times a year (September-May) by the Idaho Department of Fish and Game.

Classroom subscriptions and an Educator's Guide are available for \$40.00 per year and includes a classroom set of 30 copies mailed to your school each month.

Subscriptions of 10 copies or less are available for \$25.00.

This publication is made possible through the sale of wildlife license plates.

For more information, call or write:  
Wildlife Express, Idaho Department of Fish and Game,  
600 South Walnut, PO Box 25, Boise, Idaho,  
83707 (208) 287-2890.

Lead Writer: Adare Evans  
Layout: Sandy Gillette McBride

Contributors: Lori Adams

- Vicky Runnoe

WE WOULD LIKE TO  
HEAR FROM YOU!

If you have a letter, poem or question for Wildlife Express, it may be included in a future issue!

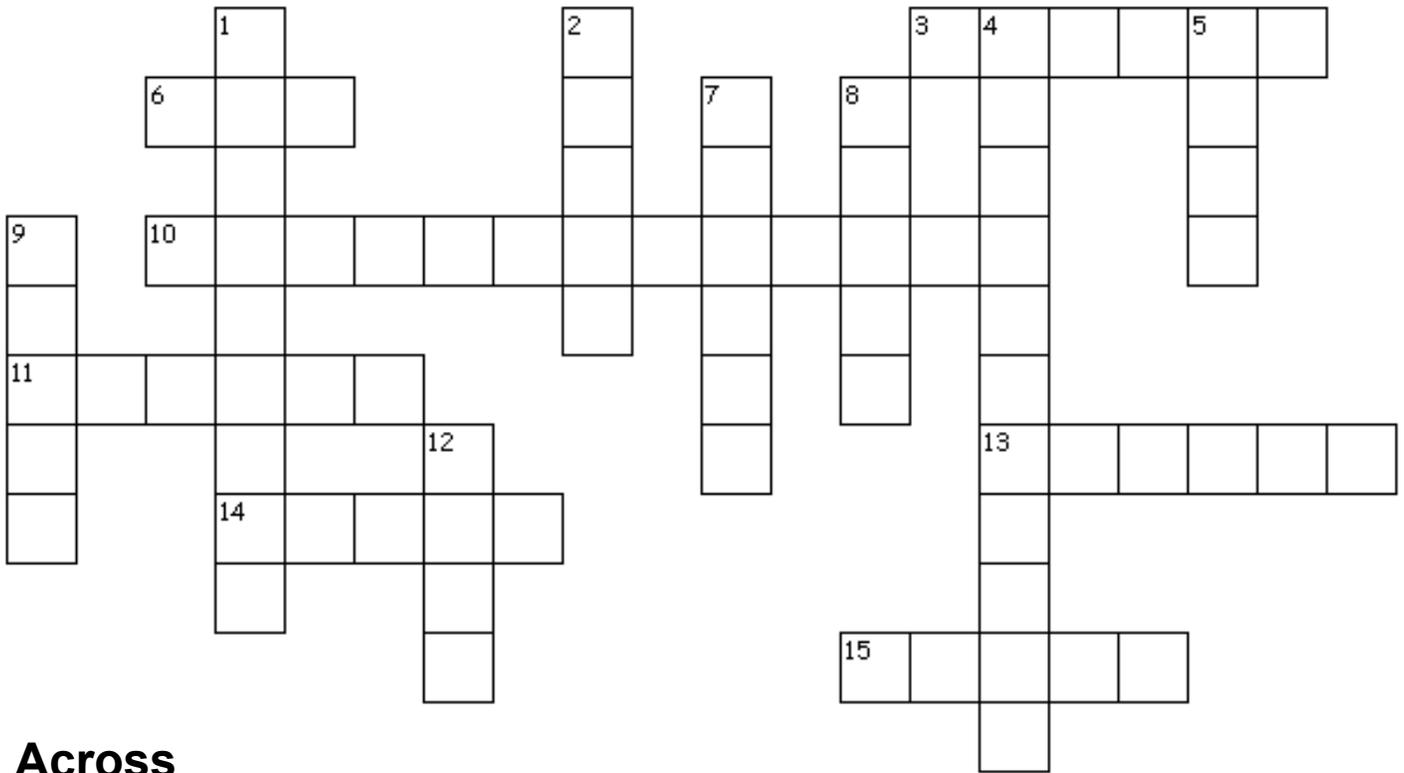
Send it to the address printed above!

Look for printable copies of Wildlife

Express on the web at

<http://fishandgame.idaho.gov>

# Ladybug Crossword



## Across

3. Ladybugs are a type of \_\_\_\_\_.
6. Insects have \_\_\_\_\_ legs.
10. Ladybugs go through a complete \_\_\_\_\_.
11. Pheromones are powerful \_\_\_\_\_.
13. Ladybug \_\_\_\_\_ look like small, spiky alligators.
14. Insects have \_\_\_\_\_ main body parts.
15. When scared, ladybugs ooze yellow \_\_\_\_\_ from their legs.

## Down

1. To survive the cold winter, ladybugs \_\_\_\_\_.
2. The scent of a pheromone may last for five \_\_\_\_\_.
4. This is on the outside of a ladybug.
5. Many cultures believe that ladybugs bring good \_\_\_\_\_.
7. This is a ladybug's favorite food.
8. The colors of red, yellow and orange warn predators that ladybugs \_\_\_\_\_ awful.
9. Ladybugs help gardeners by eating insect \_\_\_\_\_.
12. Ladybugs may play \_\_\_\_\_ to avoid being eaten.

