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Bruneau Dunes Tiger Beetle

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BRUNEAU DUNES TIGER BEETLE

We have tigers in Idaho! They have stripes, are voracious predators and have six legs. That's right, six legs.

These tigers are tiger beetles! Tiger beetles live in a wide variety of habitats from sand dunes to streambanks. They can be found across the state from mountain peaks to southern deserts. Idaho even has a few species of tiger beetles that are found only in Idaho. One of those is the Bruneau Dunes tiger beetle. It is found at Bruneau Dunes State Park south of Mountain Home.

Bruneau Dunes tiger beetles are handsome beetles. You may think of beetles as being brown or black in color, but these beautiful beauties are stunning. The adults have shiny blue-green heads, thoraxes (the middle of the body), legs and markings. White hairs cover the legs and underside of the body. Hairs above their large black eyes almost look like lashes or out of control eyebrows. Powerful cream-colored jaws, called mandibles, make up half of the head. The mandibles are used to grab and chomp up food. Bruneau Dunes tiger beetles are the predators of other insects; they are insectivores.

Bruneau Dunes tiger beetles spend most of their time in the spaces between the sand dunes. The ground here has some smaller rocks and cobble mixed with the sand. This is where a tiger beetle will live out most of its life. Bruneau Dunes tiger beetles mate in the spring. Females lay eggs one at a time, often in a small burrow. Scientists aren't sure how many eggs they can produce. Females lay eggs with an ovipositor (ov-i- POS-i-tor). Ovi means eggs, so an ovipositor is an egg depositor. She sticks the eggs less than an inch down in the ground. In a few weeks, larvae break out of the eggs. Larvae are immature or young beetles. They look a bit like small white worms with jaws. The larvae dig tiny vertical burrows in

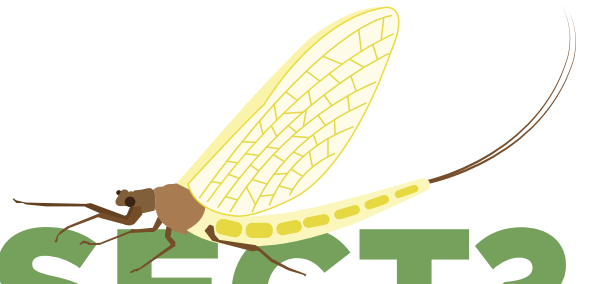
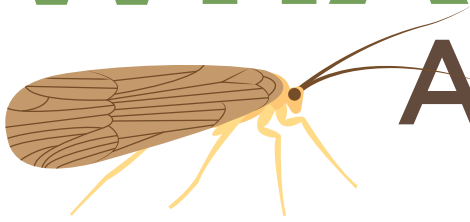
the sand. Their burrows are about as wide as a pen head! Larvae wait and watch with just their heads sticking out of the burrows. When an ant or other insect gets too close, they strike and snatch it up. Larvae have to wait for their snacks to come to them. It can be a long time between meals; they can go for days without eating. With little food, tiger beetles grow and mature slowly. It may be three or four years before they become adults. Once they reach adulthood, Bruneau Dunes tiger beetles live less than a year.

The best time to see this insect scurrying around on the sand is in the spring and fall after it rains. The wet sand makes it easier for them to dig a burrow and not have it collapse. During summer, the adults burrow in the ground to escape the heat.

Idaho Fish and Game is concerned about the Bruneau Dunes tiger beetle and is studying them. A plant called cheat grass is growing in their habitat. Cheat grass is a non-native plant. It is not supposed to be there. Cheat grass is changing the habitat where tiger beetles live. Bruneau Dunes tiger beetles live nowhere else in the world. If the habitat changes too much, they may become extinct. These amazing beetles may vanish forever. Idaho Fish and Game is learning everything they can about the beetle to see if there is some way to get rid of the plants without hurting the beetles. We want the beautiful Bruneau Dunes tiger beetles to forever be a part of Idaho!



WHAT'S AN INSECT?



They 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 as adults. 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. Close up, 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.

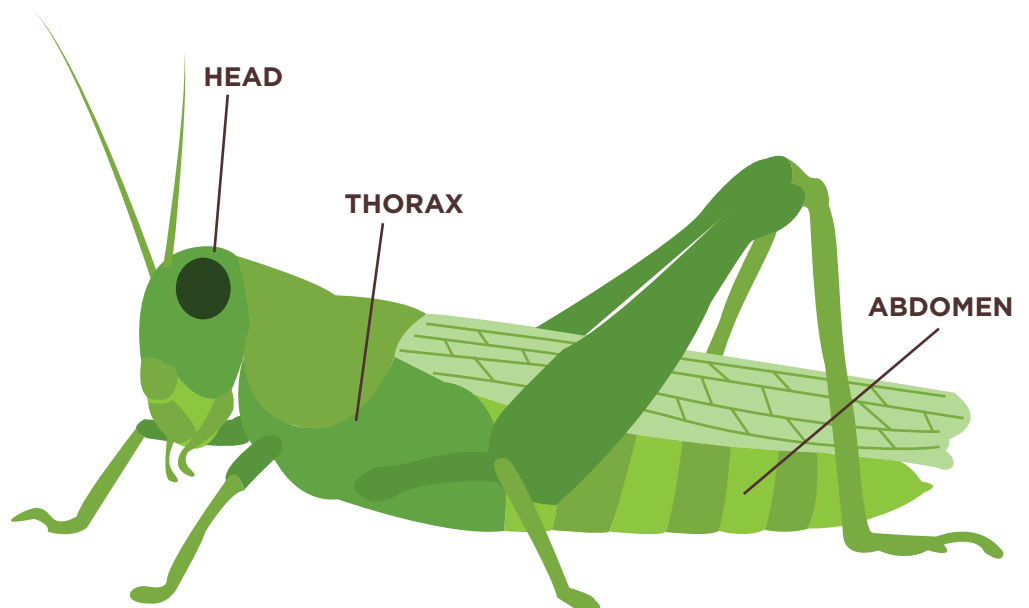
The thorax, or middle part of an insect, is where the wings and legs are found. All adult insects have legs, but not all insects have wings. Tiger beetles have two pairs of wings. One pair of wings is for flying; another is for protection. Their protective wings are called elytra (EL-i-truh).

Most insects breathe through tiny holes on their abdomens called spiracles (SPIR-i-kels). Insects that live in water might drown if they had spiracles, so insects that spend a lot of time in water have a way to deal with water entering their spiracles. Water beetles carry an air bubble against their spiracles while underwater. They get oxygen from the bubble. When the bubble starts to run out of air, water beetles swim up to the surface

of the water and grab another air bubble. Other water insects breathe with gills just like fish. Some 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. This process is called molting.

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!



A BUG

SQUISH IT!!

Often when we think of insects, we think of things that bite us, sting us, or suck our blood. Sometimes it is easier to see the harmful things that insects do and not see their benefits. Can you imagine a world without insects? Sitting around a campfire may be a bit more pleasant, but other things would also be affected. Our lives would be very different. It is unlikely that we would be able to survive on Earth without insects.

Insects help make the food we eat. Insects pollinate more than 200 kinds of crop plants just in the United States. Take away insects and there would be no carrots for salads, no watermelon or apple pie, no vanilla or strawberry ice cream. We would also have a world without chocolate. A tiny fly, no bigger than a pin head, pollinates cacao flowers. Chocolate is made from the seeds found in the cacao seed pod.

There would be no honey, silk, inks or dyes. Insects and insect parts are used to make jewelry and beads. Insect products are even used to make medicines to fight off infections and help with painful arthritis.

Insects are valuable scientific tools. They have been used for studying ecology and genetics. Because grasshopper and cockroach nerves are similar to humans, they have been used to test the effects chemicals might have on people.

Insects are important parts of the food web. Bats, birds, skunks, raccoons and fish are just some animals that eat insects. Insects are also important decomposers. Think of all the dead trees, dead animals and animal poop there would be with no insects to help clean things up.

Have you ever stopped to watch an insect? Many people like to watch and photograph butterflies and other insects. People in China even keep crickets as pets!

Next time you feel like squishing an insect, think about what the insect does for you. You may think twice about smashing that bug. Well, maybe not mosquitoes!



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Other CREEPY CRAWLERS

You turn over a rock in your back yard, and something darts quickly away. You see more than six legs, so it can't be an insect. What is it?

You may call the creepy crawler a bug, but most likely it is not a true bug. A bug is actually a type of insect. Bugs are insects that have four wings and sucking mouthparts. The two bottom wings are lacy, and the top wings are leathery with lacy tips. Water skippers and squash bugs are examples of true bugs.

The creepy crawler you saw running away was probably another type of arthropod. Arthropods

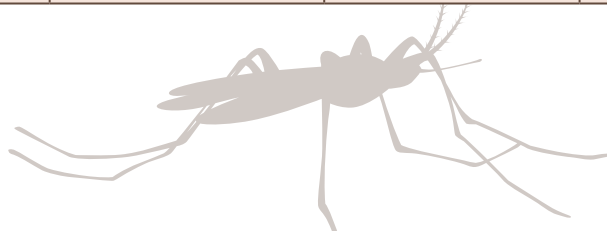
are animals that include insects and their relatives. All arthropods have exoskeletons and jointed legs. The word arthropod means "jointed foot."

Arthropods are divided into five main groups: arachnids (e-RAK-nids) (spiders, ticks, mites, scorpions), crustaceans (krus-TA-shens) (crabs, lobsters, crayfish, shrimps, sowbugs or roly pollies), centipedes, millipedes and insects.

The chart below will help you figure out where your creepy crawler belongs.



	Arachnids	Crustaceans	Centipedes	Millipedes	Insects
Body Parts	2	2	Many Segments	Many Segments	3
Legs	8	Usually 10	Many, 1 Pair per Segment	Many, Usually 2 Pairs per Segment	6
Antennae	None	2 Pairs	1 Pair	1 Pair	1 Pair
Habitat	Land	Saltwater and Freshwater, Rarely Land	Land	Land	Land and Freshwater, Rarely Saltwater



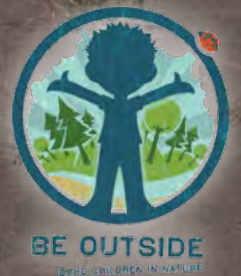
EXPLORE IDAHO'S STATE PARKS

The Bruneau Dunes tiger beetle is named after the place where it lives, Bruneau Dunes State Park. This is just one of 30 state parks and trails managed by the Idaho Department of Parks and Recreation.

Our state parks are a great place to explore and have fun in the outdoors. Bruneau Dunes State Park can become hot in the summer, so spring is a great time to visit. Bruneau has the largest freestanding sand dunes in North America. The tallest sand dune soars to 470 feet! It is exciting to climb the dunes and slide down them on a sandboard. Some people even ski the dunes. Just be sure to wear goggles. Sand in the eyes is no fun at all. If sand sledding doesn't sound like fun, how about fishing, hiking, camping or star gazing? Bruneau is far away from city lights, so it is the perfect place to look at stars. Idaho's only public observatory is at Bruneau Dunes State Park. Just be sure to check the times when

the observatory is open, and you may need reservations for some events. You can also look for the Bruneau tiger beetle. If you find one, just look at it. Some people might want to take a rare beetle home with them, but it is against the law to do that in an Idaho State Park. And this beetle is so rare; we need to keep as many of them as we can in their habitat.

Idaho's state parks are found all across Idaho. Some may even be found close to where you live. Lucky Peak and Eagle Island are very close to Boise, Idaho's state capital. Visit the Idaho Parks and Recreation website at <https://parksandrecreation.idaho.gov/> to see if there is a state park near you. You may find a park full of excellent adventures to fill your spring and summer.



Bruneau Dunes Tiger Beetle Word Search

Find these words associated with the Bruneau Dunes tiger beetle.

E P D M B W A A C I S A S B L
 L P P W I E N Y B Y J E P R U
 Y C Q N L T X M V U L L I U F
 T V G B E B O I Z B R G R N I
 R S B N L N F N I Z T G A E T
 A O N Y W V D D J I A G C A U
 C A N P R S N T G U W U L U A
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WORDS :

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 METAMORPHOSIS
 PREDATORS
 SAND
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 TIGER BEETLE
 WINGS

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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:

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