SUMMER 2020

Windows to Wildlife

Your support at work in Idaho's landscapes

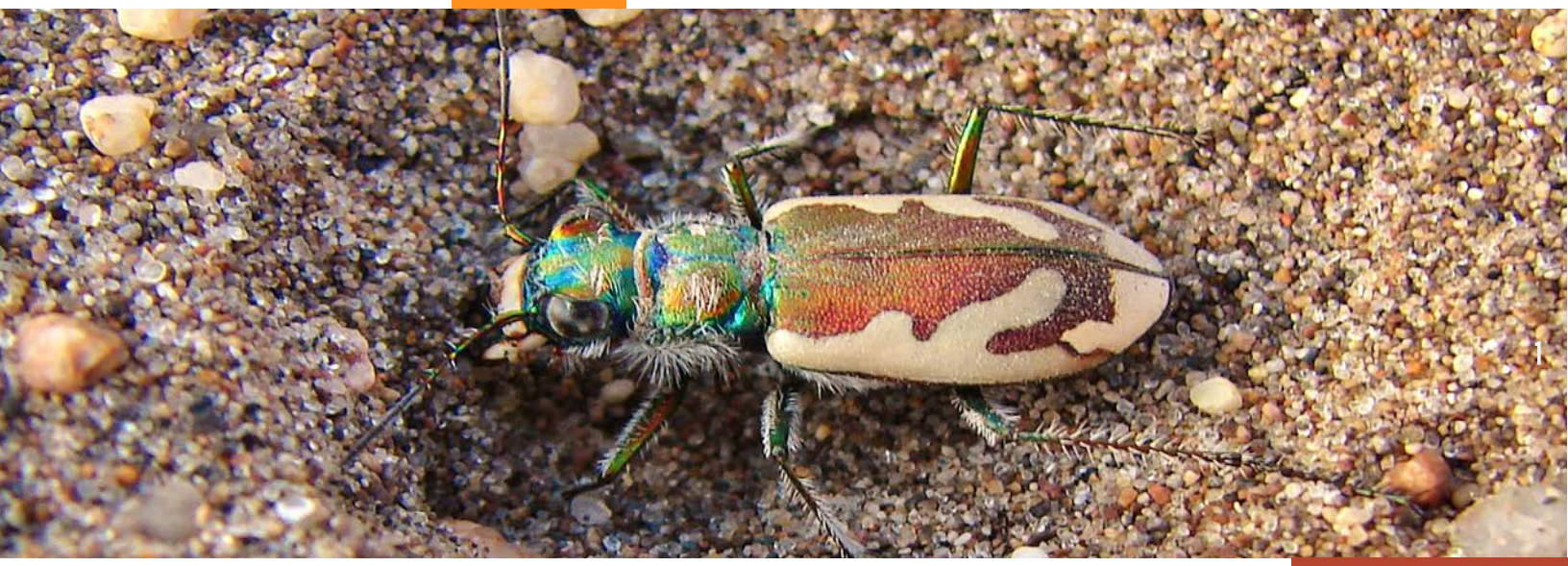

PHOTO BY: Greg Jacobs, CC BY-NC 3.0, Flickr

Idaho's Own Tiger King

by Keats Conley*, Environmental Staff Biologist
Magic Valley Region, Idaho Department of Fish and Game

Aggresive predators roam the surface of select pockets of sand dunes in southern Idaho. Their speed is quick as they spring on unsuspecting prey, shredding with fearsome, sickled jaws. Their jaws, called mandibles, are toothed like a buck saw. Each tooth is roughly the size of a goathead spike.

Idaho's tigers are in the genus *Cicindela*, family Cicindelidae, order Coleoptera, class Insecta. Other familiar members of Coleoptera include potato bugs, darkling beetles, and, my daughter's favorite, ladybirds. Coleopterans are united by the presence of elytra—a pair of hardened, opaque forewings that separate to reveal the internal hindwings.
When searching for tiger beetles, your shadow is not your friend. You have to be stealthy, or your search image opens its elytra and ascends on transparent hindwings, disappearing into the sliver of space between sky and eyelashes.

Idaho has sixteen known species of tiger beetles, some of which are common and others rare. The State currently classifies five species as "greatest conservation need," including the Idaho Dune Tiger Beetle (*Cicindela arenicola*) and Bruneau Dune Tiger Beetle (*Cicindela waynei*). These two species were once thought to be one, but in 2001, studies revealed the Bruneau population to be a separate species from those in Saint Anthony.

Idaho's dune tiger beetles are what biologists call an "endemic species"— meaning they're as local and unique to the state as star garnets or ice cream potatoes[1]. Their delicate elytra are an iridescent mottling of green and gold, and their dark heads shine as if carefully dipped in a thimble of seafoam glitter. The striking appearance of tiger beetles has contributed to population declines; collection by overzealous insect-enthusiasts has detrimentally affected some populations. Habitat loss is another threat, including stabilization of dunes by invasive plants like cheatgrass. The Idaho Department of Fish and Game has collaborated with the Bureau of Land Management on tiger beetle research and population monitoring to develop management recommendations in southcentral and southeastern Idaho.

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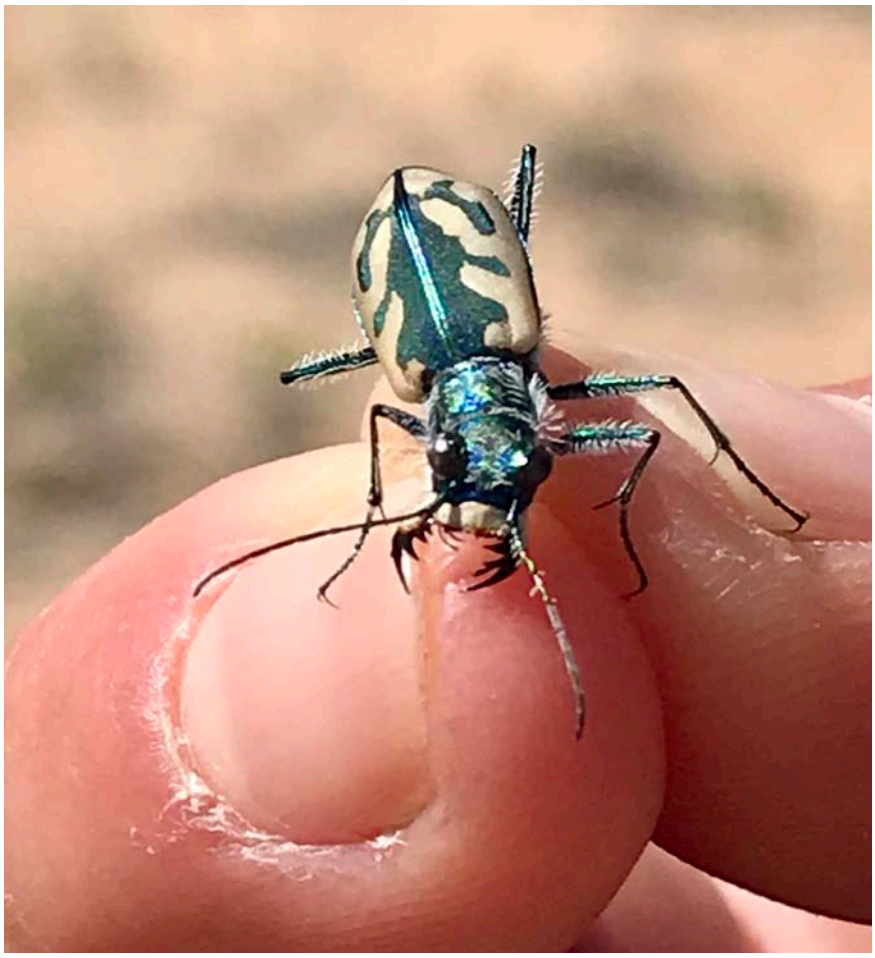


Top: Adult Idaho Dune Tiger Beetle (*Cicindela arenicola*)
Bottom: Larval tiger beetle burrows in Twin Falls County.

Photos: Keats Conley/IDFG

On a recent hike with my family, I noticed the covert signs of tiger beetle larvae: vertical sand burrows about half the diameter of a pencil, so perfectly circular that they appear to have been excavated with the careful assistance of a tiny, tiger beetle-sized compass. Despite the showiness of the adults, the larva is actually the more prolonged form of the tiger beetle life history cycle. The larva, which looks like a maggot with a horseshoe crab tacked on for a head, can live up to four years. Adults live a comparably ephemeral existence of only a few months.

I knelt down with my daughter and watched as the larvae periodically drew their heads up to level with the surface of the burrow, almost undetectable. For grubs, their crouch was surprisingly feline. We waited, breathless, for the pounce - 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.

The best time to see beetles 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.

[1] Winton and Ivie (2001) discovered a previously unknown population of the Idaho Dune Tiger Beetle in the Centennial Sandhills of southwestern Montana—the first observation of the species outside of Idaho's Snake River Plain.

Filling the Feeders

Is Your Hummingbird Nectar Safe? Five Reasons NOT to Use Red Hummingbird Nectar

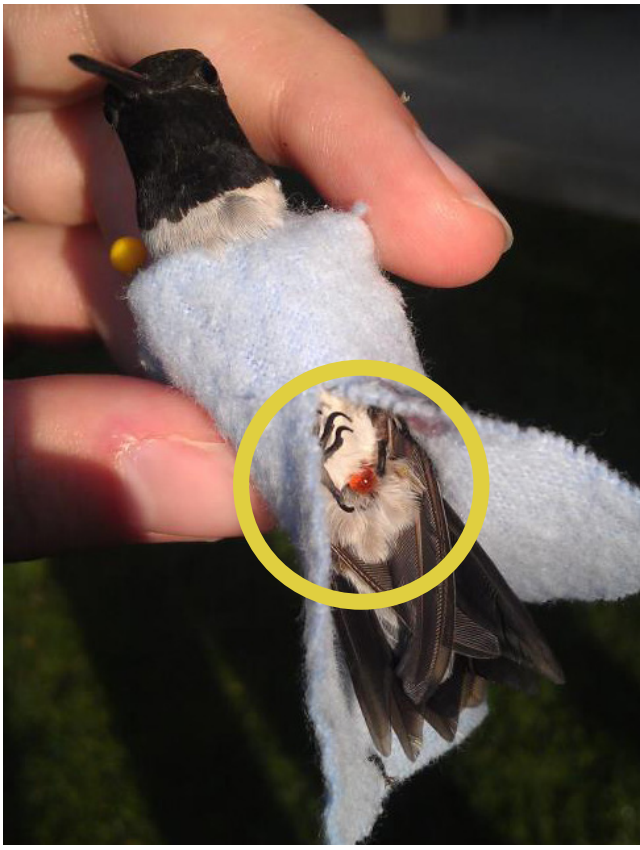
1. **It serves NO purpose**
   Most hummingbird feeders on the market have enough color on them (red or otherwise) to attract hummingbirds without the need for red dye in the nectar. If there is no red on your feeder, simply tie a piece of red flagging, rope, or fabric to it.

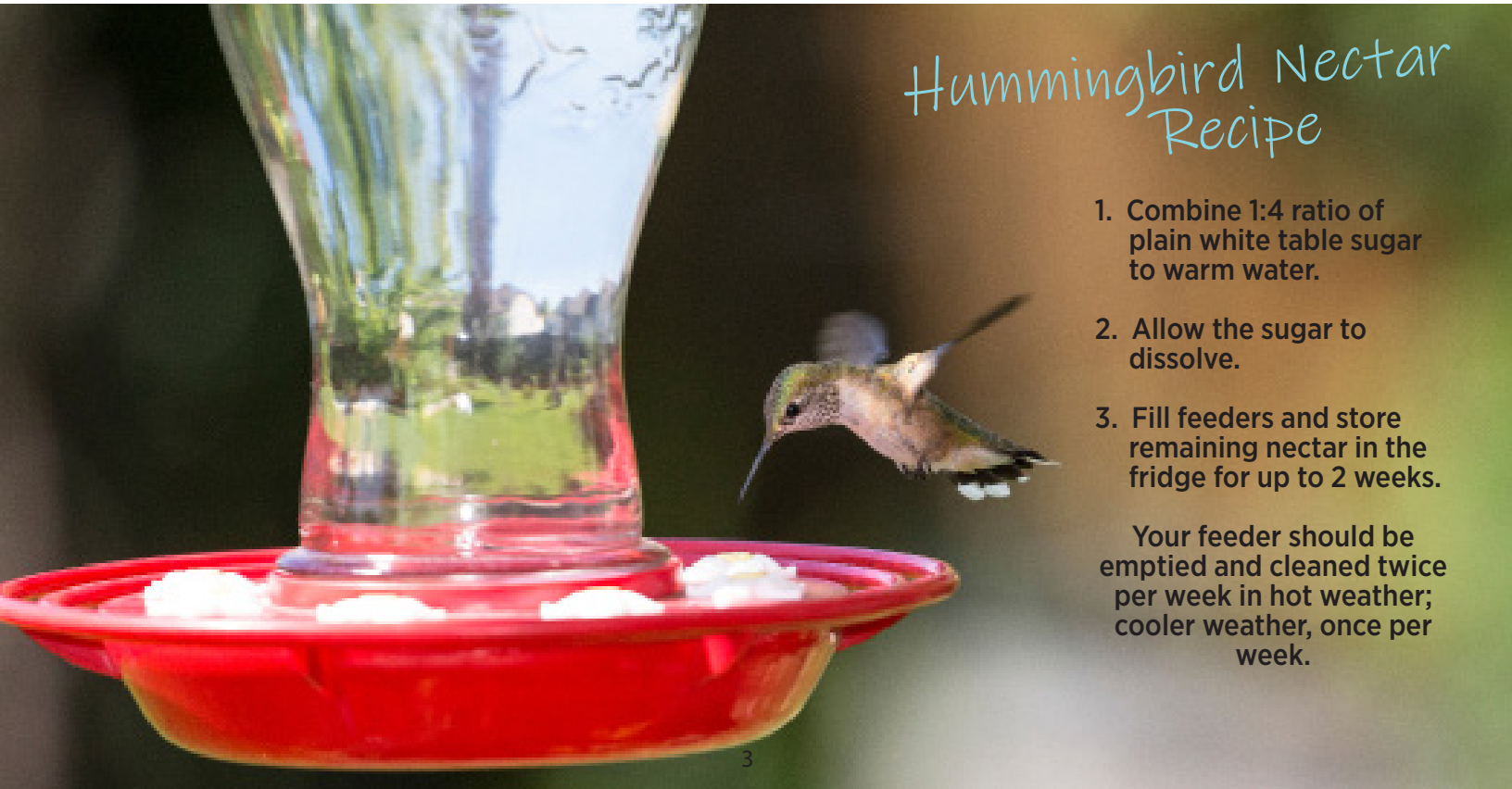
2. **The dye is petroleum based**
   The dye in colored nectar is red dye #40. Red dye #40 is now made mostly from petroleum, which is not good for any animal to ingest!

3. **Nectar from flowers is clear — not red**
   Nectar made with white table sugar and warm water at a 1:4 ratio most closely approximates the naturally clear nectar found in flowers.

4. **The red dye passes through the hummingbird**
   The dye stains their excretions red. These indicators mean the red dye is "not metabolized, but passes through the kidneys, where it might cause problems." (see photo on right)

5. **You can make clear nectar more simply**
   No more trips to the store to buy nectaror red food coloring! Make it at home. It will attract and feed all the hummingbirds you can





Hummingbird Nectar Recipe

1. Combine 1:4 ratio of plain white table sugar to warm water.
2. Allow the sugar to dissolve.
3. Fill feeders and store remaining nectar in the fridge for up to 2 weeks.

Your feeder should be emptied and cleaned twice per week in hot weather; cooler weather, once per week.

Species of Greatest Conservation Need

Artificial Nesting Platforms - A Recipe for Loon Success in Eastern Idaho?

by Elle Sutherland*, Wildlife Diversity Technician - Upper Snake Region
Idaho Department of Fish and Game

Divorce, it turns out, is not solely a human phenomenon involving lawyers and endless paperwork. Common Loons (*Gavia immer*) are also a monogamous species that form strong pair bonds, similar to humans. A male and female loon may stay together for multiple years and raise their chicks in the same location season after season. However, if they fail to have a successful nest for several years in a row they often give up on the relationship and find another partner. Biologists sometimes refer to this behavior as a "divorce."

Divorce is not the only thing making this charismatic species unique. Common Loons are large diving water birds with distinctive black and white plumage, featuring a striking white collar and red eyes. Their heavy, sharply tapered bills help them easily catch fish, which are the main component of their diet, and their legs are set far back on their body which allows them to glide through the water with ease (although moving on land is a challenge). A loon call is unique and distinctive. When heard floating across a still mountain lake the call of a loon is an eerie, haunting sound, and was once appropriately described by Henry David Thoreau as "unearthly."

The cry of breeding loons can be heard across Alaska, Canada, Newfoundland and down into parts of New England, Michigan, and Minnesota. Breeding loons are also found in northwest Washington, Wyoming and Montana. Throughout most of their range, Common Loons have a secure conservation status and are listed as a species of least concern on the International Union for Conservation of Nature's Red List. Unfortunately, in the Greater Yellowstone Ecosystem (GYE), which encompasses around 20 million acres in Idaho, Montana, and Wyoming, the chances of hearing a loon call are significantly lower than elsewhere in their range. Currently, only twenty-two breeding pairs can be found in the GYE. Therefore, Loons are considered a species of greatest conservation need in the region and they have a critically imperiled breeding status. Furthermore, this population is separated from more northern loon populations by over 200 miles, which effectively isolates it by limiting the potential for immigration. Although part of Idaho is included in the GYE, none of the twenty-two breeding pairs are currently found within Idaho's borders. Historically Idaho had twelve lakes which hosted breeding loons but in the mid 1900s loons were extirpated from Idaho and no regular nesters have since been documented, although a few nonbreeding summer residents are sighted each year.

While this sounds like a depressing outlook for the future of GYE loons, there are individuals working to restore the population. Leading this effort is The Ricketts Conservation Foundation. The nonprofit organization is focused on re-establishing loons throughout their former breeding range as well as helping populations in the GYE recover. In the GYE, the greatest threat to these magnificent birds is human disturbance; even a single kayaker paddling by can cause a pair to abandon their nest long enough to cause nest failure. In 2018, Ricketts collaborated with Caribou-Targhee National Forest staff in Wyoming to improve breeding conditions for loons by briefly limiting access to an area containing critical nesting habitat. These efforts enabled a pair of loons to have the first successful nesting attempt at the lake in fifteen years. As a result of this success, human traffic at five more lakes with important nesting habitats was temporarily restricted in the 2019 breeding season and four pairs bred successfully. Additionally, while scouting other lakes in the region for loon presence, a pair of loons was spotted on Horseshoe Lake, a small, forested lake in eastern Idaho! Following this observation, Ricketts collaborated with Idaho Department of Fish and Game (IDFG) and the Caribou-Targhee National Forest to develop a proactive strategy for 2020, providing the best possible chance for successful nesting at Horseshoe Lake.

Loons are a relatively long-lived species (up to 25+ years) and it may take one or two breeding seasons for a pair to strengthen their bond before they attempt to nest. They are also extremely vulnerable to human disturbance during the breeding season,

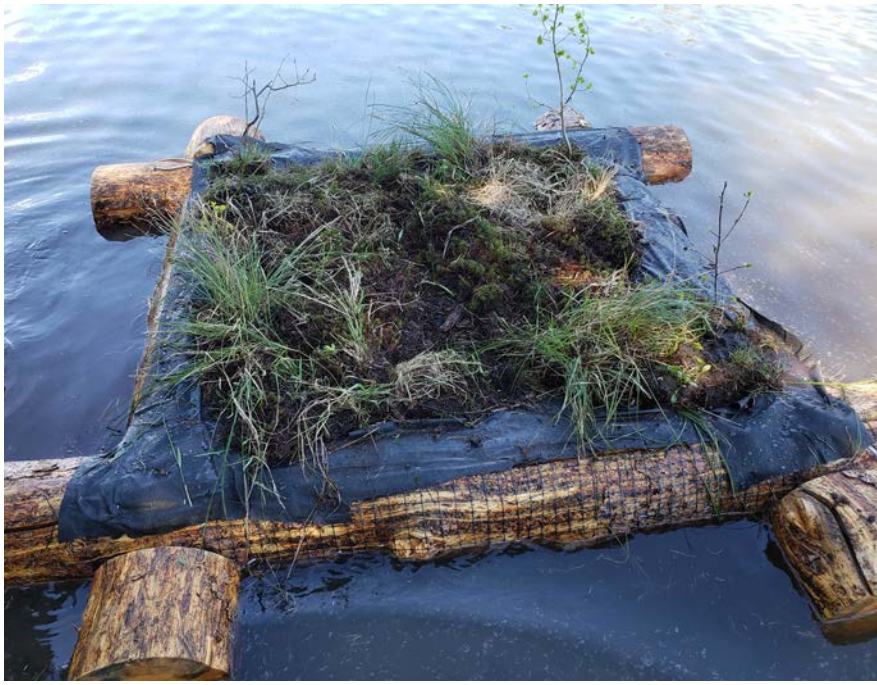
Great Northern Diver
Common loons can dive more than 200 feet underwater in search of food. The secret is that a loon's bones are solid, unlike most other birds which have hollow, lightweight bones. These solid bones are less buoyant and once they dive, loons can hold their breath for as long as eight minutes!

PHOTO BY: Sunny, CC BY-NC 3.0 Flickr

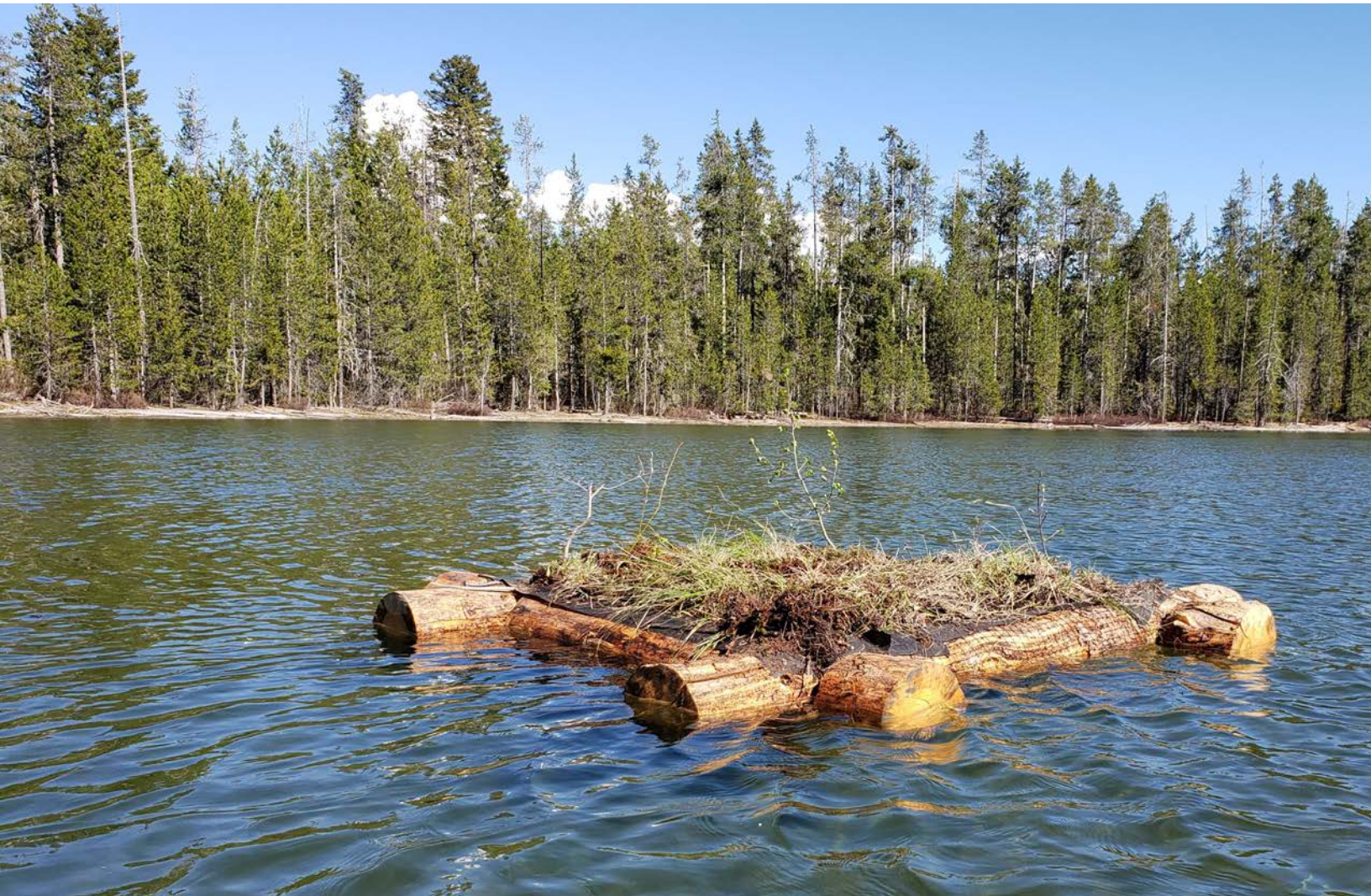
while at the same time their anatomy confines their choice of nest locations to small islands or lakeshore areas. Using this information, the group decided to create an artificial nesting platform that will provide a safe nest site for the loons and is located in an area of the lake which can be closed to public access if necessary.

Once the pair was again spotted in 2020, Ricketts, IDFG, and Caribou-Targhee leapt into action. After surveying the pair from afar using high powered spotting scopes, they were able to determine that this is likely a young pair of loons. A nest raft was constructed from four lodgepole pine logs, notched and fitted together log-cabin style on the shore of the lake. A fine, black plastic mesh was stretched tight across the top of the structure to create a water-permeable platform which was carefully planted with lakeshore sedges, grasses, moss and even a small aspen tree. The whole contraption was then hitched to two canoes and paddled out to a quiet corner of the lake, where it was anchored to await appraisal by the loon pair. Ricketts also deployed a camera facing the raft, which will allow them to both monitor loon use and also track human use of the area.

A recent survey of the lake following nest raft deployment found only a single loon cruising the placid waters. While it appears unlikely that the pair will make a breeding attempt this year, the hope is that after checking out the lake they will decide to return next season. If they do return, the nest platform will be waiting for them- a safe home for what could be Idaho's first loon nest in years!



Top: Artificial Common Loon nesting platforms have been shown to increase the nesting success of loon pairs on lakes that lack natural nesting sites. The platform that was constructed is ready and waiting for a loon pair. Photo: © IDFG **Bottom:** The newly constructed platform at Horseshoe Lake in eastern Idaho provides a safe nest site for loons. Photo: © IDFG



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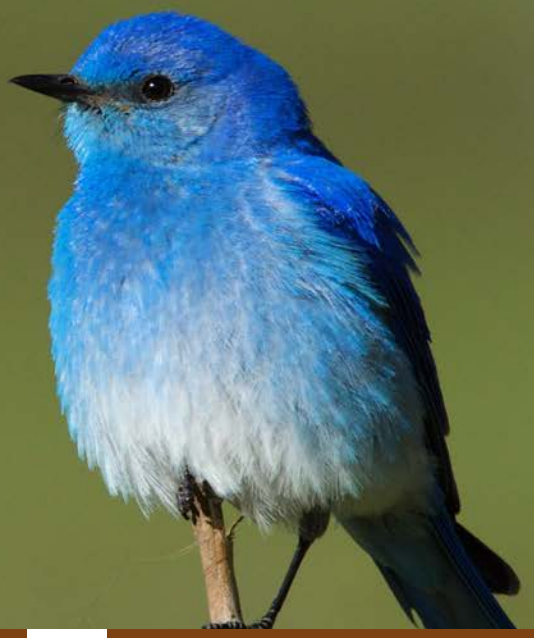

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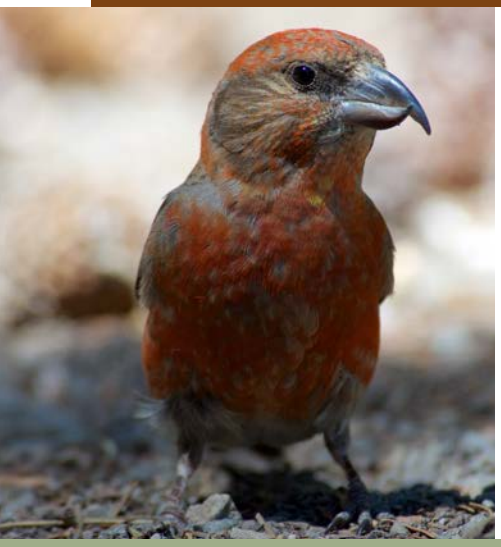
~300
SPECIES OF BIRDS
in Idaho

2000+
TRAIL MILES
within Idaho Birding Trail Sites

$432
MILLION SPENT YEARLY
on wildlife-watching activities in Idaho



Each Year *in Idaho:*

- 558,000 people watch wildlife
- 419,000 people watch wild birds
- 236,000 people traveled to watch birds

Wildlife Watchers Spend **$294** per person each day of their trip on average.

HOW DOES BIRDING *Support Communities?*

- Birdwatchers are the largest group of ecotourists.
- Attracting birders' tourism dollars to communities is a sustainable source of revenue and jobs.
- Provides a financial motivation for local communities to protect natural areas.
- Birdwatching has the potential to raise awareness about the value of conservation and wildlife management.

250+ birding sites *across Idaho*

Spotlight Species of Greatest Conservation Need

Species of Greatest Conservation Need

Hoary Marmot

Adapted from the *Idaho State Wildlife Action Plan*

The Hoary Marmot is an alpine specialist and one of the largest members of the squirrel family (*Sciuridae)* in North America. Distributed in western North America from Alaska to the Cascades and northern Rocky Mountains, this species reaches the southern limits of its range in Idaho and western Montana. Hoary Marmots are poorly documented in Idaho, with sparse records from the Selkirk, Bitterroot, Beaverhead, Boulder, White Cloud, and Salmon River mountain ranges.

Hoary Marmots weigh around 10 pounds but can reach as large as 30! They are about 30 inches long; males are a little larger than females. They are mostly gray-brown, icy-grey or silvery with a darker lower back and face and a dark, reddish tail. Distinguishing features include a white patch between the eyes and across the nose, a black cap on their head, and black feet which appear like boots.

Living among large boulder fields, talus slopes, and rock slides adjacent to wet meadows, Hoary Marmots eat massive amounts of forbs, grasses, and sedges — spending most of their time feeding during the summer in preparation for hibernation, which can be as long as seven or eight months!

Highly social, Hoary Marmots live in colonies and dig burrows used as shelter from predators and weather, and as a communal place to hibernate through the long alpine winter. They rely on winter snowpack for insulation from harsh winter temperatures.

Changing temperature and precipitation patterns are a primary threat to Hoary Marmots as they are particularly sensitive to environmental conditions such as temperature, snowpack, and timing of snow melt. Snowpack levels, the availability of the plants they eat, and the predators in the area can provide an indication of how their habitat is changing. By monitoring the Hoary Marmot's habitat and promoting and facilitating the use of prescribed and natural fires as a habitat restoration tool, these conservation actions may help to restore a natural fire interval that encourages historical forest conditions and will serve to benefit a whole suite of species, including the Hoary Marmot.

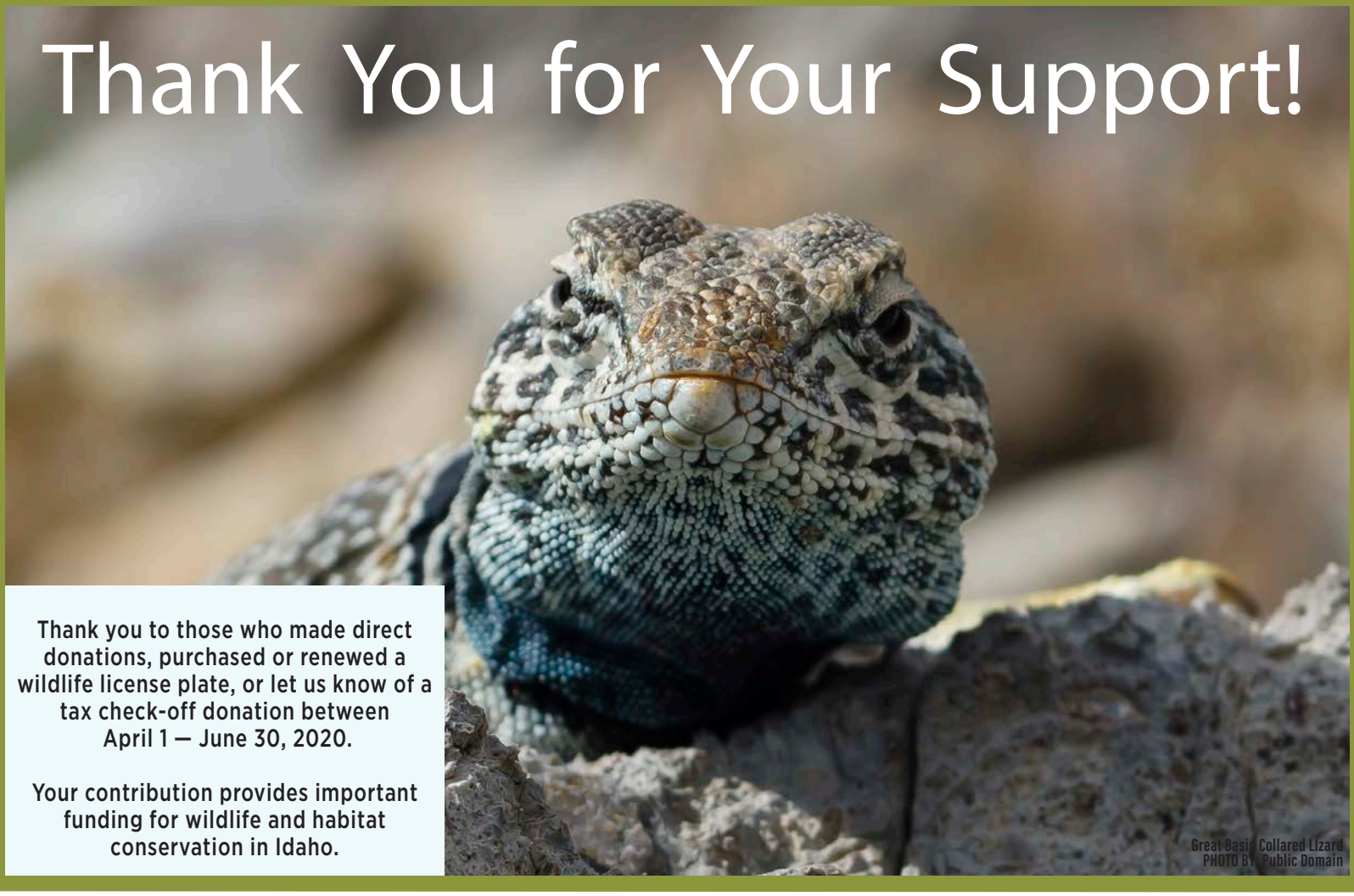
PHOTO BY: AdititheStargazer on Flickr CC-BY-NC 3.0

Did You Know?
As a rodent in the squirrel family, the Hoary Marmot was known as "the whistler" to early explorers because of the long shrill sound it makes when alarmed.

Play or "wrestling" is the most common social interaction of Hoary Marmots and occurs most frequently among young, yearlings, and 2-year-olds.

PHOTO BY: Okapix on Flickr CC-BY-NC 3.0

Thank You for Your Support!



Great Basin Collared Lizard
PHOTO BY: Public Domain

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Your contribution provides important funding for wildlife and habitat conservation in Idaho.

Windows to Wildlife

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