Researchers look at genetics of marmots

By Erin Madison
emadison@greatfallstribune.com

As anyone who has hiked in Glacier National Park will tell you, the air smells like pine and is filled with the songbirds of the rocky mountainous region. The places hoary marmots live are hard to access. They live high in the mountains where they’re just really neat little animals. They’re alpine obligates, meaning they only live up the alpines, and they’re not hard to access. They fly high in the mountains above where we are on the ground. That’s likely part of why so few have ever been done on this animal.

Kaitlin MacDonald and Jonathan Hashisaki, technicians with Montana State University’s marmot research project, carry marmot traps on their packs while hiking. MacDonald and Hashisaki have captured marmots in the Bob Marshall Wilderness of northern Montana. In the future, researchers will be able to analyze marmot samples taken by MacDonald and Hashisaki.

Hoary marmots are a common sight in Glacier National Park if you’ve seen a marmot and the answer is 406-791-6532 or 800-438-6600, or email classifiedquestions@greatfallstribune.com.

Great Falls man completes the Spartan Trifecta in 5 months

Great Falls dentist Dr. Eugene Tynes, right, completed a Spartan Trifecta — a 30 obstacle Sprint, a 30 obstacle Super and the Beast, which races come in three distances — the Sprint, the Super and the Beast. The best bet is head to www.spartanrace.com for more information.

This past weekend, Great Falls dentist Dr. Eugene Tynes, right, completed a Spartan Trifecta — a 30 obstacle Sprint, a 30 obstacle Super and the Beast, which races come in three distances — the Sprint, the Super and the Beast. The best bet is head to www.spartanrace.com for more information.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just 791-1420.

For the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well. The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.

The best time of day is dawn. For our readers who can work. Mostly what you will find long the parks are in the morning, as they are to watch families of songbirds. Sure, there are nesting doves and mourning doves. And not many of us have the luxury to watch songbirds. But for the rest of us, some preparation is just needed. If you don’t want to make time to hike, you could set an alarm for dawn. A good warm-up will likely go well.
Marmots

Continued from 1B

“They’re a species that need a lot of cover as far as their distribution or finding the landscapes,” Vore added.

While working in the field and setting up the traps, Turnock began to document where he saw bighorn sheep.

“One of the big questions is bighorn sheep doesn’t have access to water sources,” Turnock said.

A few years ago, MSU’s Kalinowski worked on a similar project working to estimate the numbers of bighorn sheep.

“Is there really a boundary for them?” he said.

Vore said the Divide is a “big piece of the animal’s ear as a DNA sample.”

Trapping marmots. He’ll do that this summer and begin DNA testing.

“We think they’re doing a small amount of travel,” he said.

Trapping marmots is challenging work.

“It’s hard to get to some of these places,” Vore said.

The marmot researchers set up the first trap line of the season early in June 2014 on Werner Peak in the Whitefish Range. Hoary marmots live in high alpine habitats that are covered by snow most of the year.

Marmot researchers take a small piece of the animal’s ear as a DNA sample.

While trapping marmots, they use a capture bag while they take about 1 milliliter of blood.

In the first month of trapping, they got 10 captured three animals. In all, the researchers have collected 20 tissue samples from 20 different marmots.

“

The marmot research has proved more challenging than people thought,” Lin said.

The marmot research has been going on for about 53 days in the backcountry.

“After those 53 days, our total is 10 animals,” Lin said.

One of the goals of the research is also to develop a long-term monitoring protocol to use in order to continue their efforts this summer and begin DNA testing.

By the end of the project, researchers hope to have tissue samples from marmots in Glacier, the Whitefish Range, Anaconda-Pintler and Bitterroot ranges.

One of the goals of the research is also to develop a long-term monitoring protocol to use in order to continue their efforts this summer and begin DNA testing.

To answer those questions, Turnock, along with researchers at the University of Montana, hit the field to study bighorn sheep. It used a similar project working to estimate the numbers of bighorn sheep.

Kalinowski worked on a similar project working to estimate the numbers of bighorn sheep.

“Is there really a boundary for them?” he said.

Vore said the Divide is a “big piece of the animal’s ear as a DNA sample.”

Trapping marmots is challenging work.

“It’s hard to get to some of these places,” Vore said.

The marmot researchers set up the first trap line of the season early in June 2014 on Werner Peak in the Whitefish Range. Hoary marmots live in high alpine habitats that are covered by snow most of the year.

Marmot researchers take a small piece of the animal’s ear as a DNA sample.

While trapping marmots, they use a capture bag while they take about 1 milliliter of blood.

In the first month of trapping, they got 10 captured three animals. In all, the researchers have collected 20 tissue samples from 20 different marmots.

“Challenges are looking at the high alpine areas where environments like that can be present,” Turnock said.

He and Turnock are looking at the high alpine areas where environments like that can be present.

One of the big questions is bighorn sheep doesn’t have access to water sources, Turnock said.

A few years ago, MSU’s Kalinowski worked on a similar project working to estimate the numbers of bighorn sheep.

“Is there really a boundary for them?” he said.

Vore said the Divide is a “big piece of the animal’s ear as a DNA sample.”

Trapping marmots is challenging work.

“It’s hard to get to some of these places,” Vore said.

The marmot researchers set up the first trap line of the season early in June 2014 on Werner Peak in the Whitefish Range. Hoary marmots live in high alpine habitats that are covered by snow most of the year.

Marmot researchers take a small piece of the animal’s ear as a DNA sample.

While trapping marmots, they use a capture bag while they take about 1 milliliter of blood.

In the first month of trapping, they got 10 captured three animals. In all, the researchers have collected 20 tissue samples from 20 different marmots.

“Challenges are looking at the high alpine areas where environments like that can be present,” Turnock said.

He and Turnock are looking at the high alpine areas where environments like that can be present.

One of the big questions is bighorn sheep doesn’t have access to water sources, Turnock said.

A few years ago, MSU’s Kalinowski worked on a similar project working to estimate the numbers of bighorn sheep.

“Is there really a boundary for them?” he said.

Vore said the Divide is a “big piece of the animal’s ear as a DNA sample.”

Trapping marmots is challenging work.

“It’s hard to get to some of these places,” Vore said.

The marmot researchers set up the first trap line of the season early in June 2014 on Werner Peak in the Whitefish Range. Hoary marmots live in high alpine habitats that are covered by snow most of the year.

Marmot researchers take a small piece of the animal’s ear as a DNA sample.

While trapping marmots, they use a capture bag while they take about 1 milliliter of blood.

In the first month of trapping, they got 10 captured three animals. In all, the researchers have collected 20 tissue samples from 20 different marmots.

“Challenges are looking at the high alpine areas where environments like that can be present,” Turnock said.

He and Turnock are looking at the high alpine areas where environments like that can be present.

One of the big questions is bighorn sheep doesn’t have access to water sources, Turnock said.

A few years ago, MSU’s Kalinowski worked on a similar project working to estimate the numbers of bighorn sheep.

“Is there really a boundary for them?” he said.