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The Fairy Trail is extra special this autumn

RUBY'S RECENT ADVENTURE

**Ruby, our snake,
Has a tummy ache**
or does she?

by

Arlene Westhoven, GRNA naturalist



Many of you know that Grass River Natural Area has an albino snake that was given to us several years ago. She is a California kingsnake which is not indigenous to our area, and due to her lack of necessary camouflage coloring, we knew she would likely not survive in the wild. While we traditionally use only native species in our education program and do not keep animals in captivity, we decided that keeping Ruby would benefit her and our visitors who get an up close look at this beautiful reptile. Her name comes from her striking ruby red eyes.

We have been feeding Ruby a thawed mouse once a week by placing the mouse in her terrarium habitat. She strikes at the mouse, then maneuvers it so she can swallow it whole. It takes about 20 minutes for the food to enter her loo-o-ng stomach and begin the process of digestion. The last few times we fed her, she swallowed the food, but it was then regurgitated, which is not normal.

I talked with Education Director James Dake about this unusual occurrence and we decided a trip to the Dr. was in order. After an examination, Dr. Durham, an exotic species veterinarian at the Northern Michigan Veterinary Hospital, gave us some information about Ruby and snakes in general. He explained that snakes require a body temperature of 84 – 88 degrees to digest their food, so Ruby was likely too cool to digest the mouse properly.

Snakes are animals that are 'ectothermic' (outside temperature). This means they do not maintain a constant body temperature like 98.6 degrees in our case (endothermic). We call this cold-blooded because, unless the environment is very warm, they feel cold to us. In winter, when they can't garner heat from external sources, snakes usually remain deep in a burrow below the frostline, where they go into a state called brumation - the ectothermic equivalent of hibernation - in which their body temperatures fall to just above freezing and their metabolism decreases dramatically.

Another bit of information we learned was that even though Ruby is an inside snake, she still senses seasons. Dr. Durham suggested that we feed Ruby every other a week starting in fall and continuing through winter as snake metabolism slows down as their temperatures drop, which happens even in an indoor habitat like the Grass River Center.

Dr. Durham's prescription for Ruby was to make some changes in her habitat. We keep Ruby in a terrarium with a water bowl and a log 'Quonset hut' for shelter. The warm end of the terrarium should be 85 – 88 degrees and the cool end, 70 – 75 degrees. Snakes depend on the outside environment to regulate their body temperature and only remain active when they are warm. This is why we see snakes basking on warm surfaces. He recommended a tank heater be placed at one end which could be a 'warming rock' that simulates the natural environment.

Snakes have a daily rhythm, sensing light through the pineal gland in their skull. They also like to spend time in the dark, thus Ruby's hut. 'Pet' snakes also need natural light, so we were using an incandescent bulb on a timer for light and heat. We will now replace it with a UV light on a timer, which will more closely replicate outdoor light.

We, at Grass River, are happy to have had Ruby for over 15 years. She is a special favorite with the kids who visit the Grass River Center. Over the years, she has been healthy, so we are

grateful that a few changes in her environment will ensure she stays that way. We are happy to report that this week Ruby ate and digested a mouse. Thank you to Dr. Durham and the Northern Michigan Veterinary Hospital for her care.



So, you see, the story has a happy end

For the albino snake, Ruby, our friend.

QUESTION? What temperature would a snake have to be to NOT feel cool to you?
(See the answer at the end of this newsletter)

FAIRY TRAIL IN THE FALL

We hear that fairies hibernate or perhaps go to warmer climates in the winter, but GRNA naturalist Anne Drake thought our Fair Trail should have one last hurrah before the snowflakes cover the fairy habitat.



Drake created her own storybook trail proposing first that perhaps it is fairies that "splash fall colors all over the woodlands with paintbrushes", and then telling the real story of what causes leaves to change color in the autumn. The story is advanced down the Fairy Trail using pictures of brightly colored maple leaves, each with the next portion of the story printed on it.

Be sure to take your fairy watchers out to GRNA this fall to enjoy this story and see the brightly colored woodlands as you walk the trails. You can even use your visit toward the Trails Challenge! It's simple: hike all 7 of our trails between now and Dec 31st, fill out a short trail log, get some sweet GRNA swag and be entered to win a book prize pack, including a copy of the NEW EDITION of our Field Guide to Northwest Michigan.

Visit <https://www.grassriver.org/grnatrilschallenge.html> for all the details.

COVID 19 PROTOCOL REMINDER

Please be aware that the safety protocols put in place by Grass River Natural Area to protect visitors and staff against the spread of COVID-19 will remain in place for the foreseeable future, namely that face masks and social distancing will be required to enter the Grass River Center. Face masks for adults and children are available as you enter the Grass River Center if you forget yours.

As always, our trails remain open from dawn to dusk. Masks are not required on the trails although they are encouraged. We ask that you work to maintain distance from non-family members, and if possible, turn away from passing groups, especially if you or they are not wearing masks.

Thank you for your continued adherence to these protocols.

2020 GRNA PHOTO CONTEST ACCEPTING ENTRIES NOW



2019 Judges' Choice Award
by Mark Harder

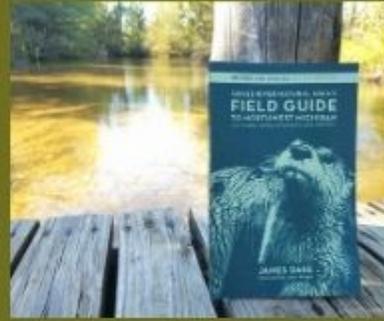


2019 People's Choice Award
by Christopher DeLange

Enter up to three photographs you took at GRNA by
Sunday, November 22
[Click here for complete details](#)

THIS JUST IN!

The 2nd Edition of
Grass River Natural Area's
FIELD GUIDE
to Northwest Michigan
is now available.



This guide is written and compiled by GRNA Education Director James Dake. It features several new and expanded sections and a new Foreword by Executive Director Jenn Wright.

Cost is \$18.87 plus tax

Order online by clicking on this box or available at the Grass River Center Gift Shop

NEW LOGO WEAR

Purchase a shirt for yourself or as a gift and GRNA benefits



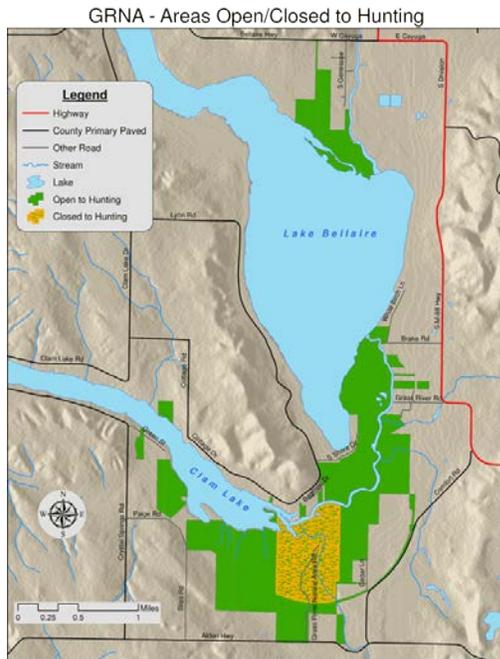
Choose from any of the logos featured above printed on a variety of styles, colors, & sizes from youth to adult.

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A portion of the sale comes back to GRNA as a donation.

REMINDER
HUNTING SEASON IS HERE
TAKE CARE AND PLEASE OBSERVE THE RULES

Many people enjoy hunting in the undisturbed areas in the Grass River Natural Area, and we welcome hunters as long as they observe the regulations set out by Antrim County.



Antrim County Ordinance Section 13, #1 of 1988 allows hunting on Grass River Natural Area property outside of the “Education Zone” during appropriate hunting seasons.

The Education Zone is shown in yellow on the map. An enlarged version can be viewed by [clicking here](#).

Please be considerate of the boundaries, as we educate the public in the Education Zone year-round. If these guidelines are not followed, hunting poses a risk to the public and our staff.

Also, please take care to stay off neighboring properties and observe a safe distance from permanent structures along GRNA's boundary.

If you are hiking at GRNA this fall, we ask that you consider wearing hunter orange, even when walking in the Education Zone, to make yourself highly visible.

CONSIDER A DONATION

Our financial well being is dependent on programming dollars and donations, and with the former sidelined for the most part at the moment, donations are of paramount importance. Your generous support is always greatly appreciated, but in these difficult days, your willingness to help us continue our mission with a personal donation promotes you to Nature Warrior status at GRNA.

ANSWER TO THE QUESTION POSED IN THE LEAD STORY

A snake's body temperature would need to be approximately 98.6 degrees to not feel cold to your touch.

Grass River Natural Area is a nonprofit organization that has flourished for fifty-one years because of the generous support of people who value our mission "to manage the Grass River Natural Area, conserve and protect its watershed, and provide opportunities that increase knowledge, appreciation and community-wide stewardship of the natural environment".

If you believe in our mission and want to help us fulfill it for many years to come, please click on the Donate button below. Your support is greatly appreciated.

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