

# Wildlife Book Club: Winter World by Bernd Heinrich

Tuesday, February 4, 2015



Chapin Hardy, WCV:

Hi Kate! Glad you could make it!



Comment From Kathy in NM ♥

Checking in...:-)



Amanda Nicholson, WCV:

Time for book club!!

**Comment From Kate** 

Hi Raina and book clubland!

Comment From 33mama (•x•?

I'm here!

Comment From Lydia, PA ♥ S•x•? ♥

Just got here!

Comment From Kandis-Renee from chesterfield va.

can I join?



Chapin Hardy, WCV:

Of course!



Amanda Nicholson, WCV:

Sure! We're having an online book club -- Winter World. It's about how animals adapt to the winter!



Amanda Nicholson, WCV:

And definitely come back Kandis and chat about your future career goals -- we're always happy to talk wildlife and future plans!

#### **Comment From Kali - TX**

i do want to start by saying that i try to check out the biography of each author for the books we read, and here's the one i found for this author. <a href="http://en.wikipedia.org/wik...">http://en.wikipedia.org/wik...</a>



Raina Krasner, WCV:

Cool.

#### **Comment From Kate**

I have always been fascinated with how animals survive while I am snug in my bed...



#### Amanda Nicholson, WCV:

Makes me happy I have a snug bed!!



#### Raina Krasner, WCV:

Yes! It's hard to imagine how so many different species of wild animals survive through some truly cold, icy weather.



#### Chapin Hardy, WCV:

Ha! I actually read all of this book sitting in my warm bed.

#### **Comment From Kate Guenther**

This author has a LOT of books about various nature topics.



#### Raina Krasner, WCV:

Yes, I have couple of his other books on my list to read ... mostly those about Ravens.

## Comment From Lydia, PA ♥ S•x•? ♥

I loved this quote from the introduction: "Each species experiences the world differently, and many species have capacities far different from ours. They can show us the unimaginable"



## Amanda Nicholson, WCV:

Yes, he had another line in there too -- why are we surprised (about animals adapting and living in this cold winter weather)? Because we compare them to ourselves. We're weakies, sometimes!!



#### Raina Krasner, WCV:

We really are. We aren't exactly prepared to spend time in the freezing rain ... or ice.

#### Comment From Kate Guenther, WCV

Not since we evolved.



#### Amanda Nicholson. WCV:

Although sometimes I think it would be fun to eat all day long. Every second of the day.



## Raina Krasner, WCV:

Yes, but then you'd have to expend that energy you build up by shivering.

#### Comment From cwerb ♥ (•x•? ♥ (•x•? ♥ (•x•? ♥

like Dr. Rich..



#### Raina Krasner, WCV:

Ha. Yes, he did eat quite a lot.

#### **Comment From Mary E in NC**

His cabin reminded me of Ed's cabin - wildlife people love to live in the woods!

#### **Comment From BarbG**

it was a fascinating book and answered a lot of winter survival questions



#### Raina Krasner, WCV:

One thing he talked about early on was how difficult it is to define the terms related to winter survival ... and the parameters surrounding the survival techniques of so many different animals.



## Raina Krasner, WCV:

I loved his example of the many terms for "hibernation" that scientists have come up with.



#### Amanda Nicholson, WCV:

The book got a bit technical at times, but wow ... so much great science stuff. Very complex!



## Raina Krasner, WCV:

Hibernation for mammals ... brumation for reptiles ...

#### **Comment From BarbG**

He would be a fascinating professor

#### **Comment From Kate Guenther, WCV**

...diapause, torpor...



#### Chapin Hardy, WCV:

I felt he explained hibernation very well. It's a sliding scale.



## Amanda Nicholson, WCV:

I think we lost a comment from Kate, but as she added, ... diapause ... torpor ...

#### **Comment From Jay McLaughlin**

I enjoyed a lot of the technical stuff - he's a very readable writer.

## **Comment From Kali - TX**

very true about the technical, but good information

#### **Comment From Kali - TX**

i did find the book a bit difficult to read, at first, until i "got into" the author's style of writing.

## **Comment From Jay McLaughlin**

Lots of great new vocabulary.



#### Raina Krasner, WCV:

he had a good bit of technical writing mixed with anecdotes.

#### Comment From Kathy in NM ♥

It was amazing to read of all the adaptations Mother Nature provides her wild creatures that would kill us humans. Yet, they survive!



#### Amanda Nicholson, WCV:

So many terms! I can see why "hibernation" is used in terms of an adaptive function, not necessarily in terms of body temp. or some other specific physiologic phenomenon.

#### **Comment From Kali - TX**

did anyone else get the impression that he had "a thing" about golden-crowned kinglets? they seemed to be mentioned in almost every chapter!



## Raina Krasner, WCV:

Oh, he definitely did.



#### Amanda Nicholson, WCV:

Yes -- did you miss that part? He said that was the inspiration for the whole book!



#### Chapin Hardy, WCV:

It was a lovely connection throughout the book.



## Raina Krasner, WCV:

I think it was actually kind of weird that a kinglet wasn't on the cover ... instead of a chipmunk.



#### Amanda Nicholson, WCV:

I totally see why the kinglets were so inspirational -- reading about them was definitely my favorite part of the book.

#### **Comment From Jay McLaughlin**

Yes - he's very into golden-crowned kinglets.

#### **Comment From BarbG**

I had never heard of them so had to look up

#### **Comment From Jay McLaughlin**

They're so SMALL!

#### **Comment From Kate Guenther, WCV**

They're such an extreme form of small...



## Raina Krasner, WCV:

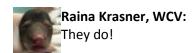
Ha. Yes!



Property of BirdNote

#### Comment From Kate H. in TN

they have a really neat song too-



#### **Comment From Jay McLaughlin**

They moved so much and had to keep getting calories in and how could they keep their body temperature so high for so long. It's amazing. To me still.

## **Comment From Kate Guenther, WCV**

I learned that if you frighten a bird off it's nighttime roost, it may die from losing the little bit of heat that was sustaining it. Wow.

#### **Comment From Kate Guenther, WCV**

It changes the way I walk through the woods at night in winter, for sure, knowing that!



#### Amanda Nicholson, WCV:

Yes -- that was amazing, Kate. They live in such an "energy edge" -- where they have to make all the right choices to stay alive!



## Amanda Nicholson, WCV:

I was kind of surprised he bugged them as much as he did then, knowing that --hitting the trees and trying to get a photo of them at night.

## Comment From 33mama (•x•?

So much shivering to keep warm! I kept thinking how uncomfortable I am when I shiver.

## Comment From Lydia, PA ♥ S•x•? ♥

I agree about the golden kinglets. That was my fav part too. Interesting info about the golden crowned kinglets incubating eggs with the help of their hot feet (said they often have 8-11 eggs in small nests, laid in 2 layers) AND while doing that are often simultaneously busy with a second nest at the same time, called double clutching. Even though it is still cold when nest building starts, Heinrich says the nests are built for warmth.



#### Raina Krasner, WCV:

I thought it was so cool that they used their hot feet!



#### Amanda Nicholson, WCV:

I loved that part -- their little hot feet! And wow -- so many eggs!!



## Raina Krasner, WCV:

And he did discuss that so many animals use different materials to build winter versus summer nests, which makes sense.



#### Amanda Nicholson, WCV:

And double-clutching -- wow!

#### **Comment From BarbG**

and 2 nests

#### Comment From Kali - TX

much like hummingbirds or bats - so much energy consumed, being disturbed at night (or hibernation) can cost dearly.

#### **Comment From rejoyce**

I really enjoyed his personal stories.

#### **Comment From Jay McLaughlin**

I understand they're here in VA but I've been unable to locate one. And I'm looking!

#### **Comment From Jay McLaughlin**

I saved a lot of quotes I found informative. One said "Only those [butterflies] who lucked out by flying southward survived; thus an evolutionary direction and destination was born and then grew"



## Raina Krasner, WCV:

The kinglets? I have not seen one either.

## Comment From Lydia, PA ♥ S•x•? ♥

Yeah--thos hot feet and double cluctching was amazing to me!



#### Amanda Nicholson, WCV:

I actually found a BirdNote that talked about kinglets -- and referenced the author.

http://birdnote.org/show/kinglets-winter

## **Comment From Jay McLaughlin**

So is that at birdnote.com? Very great!

#### **Comment From Kate H. in TN**

I think those were the original animal that got him into investigating he others

## **Comment From Kali - TX**

oh, neat bird note! thanks!

#### Comment From 33mama (•x•?

Poor little kinglets!

## Comment From Lydia, PA ♥ S•x•? ♥

Amazing 110 degrees body temp!

## **Comment From rejoyce**

I would love to see one!!

## **Comment From Kate Guenther, WCV**

When I saw them on my property, they were in a flock in thick brush and they NEVER stopped hopping around gleaning stuff off the leaves.



## Amanda Nicholson, WCV:

So crazy!

## **Comment From Kate Guenther, WCV**

We got one in the Center a few weeks ago, a kinglet.



## Amanda Nicholson, WCV:

WHAT?



Raina Krasner, WCV:

We did?



## Amanda Nicholson, WCV:

I must've been sleeping.



## Chapin Hardy, WCV:

From where?

## **Comment From Kate Guenther, WCV**

Golden-crowned...



#### Raina Krasner, WCV:

Interesting.

#### **Comment From Kate Guenther, WCV**

I'd have to check from where...

#### **Comment From BarbG**

wow

## **Comment From Jay McLaughlin**

Aha - birdnote.org - very great. I'll look at it later tonight.

#### **Comment From Kali - TX**

wow!

## Comment From Lydia, PA ♥ S•x•? ♥

I so hate the cold winter weather...so I love Heinrich's description of the little Golden Crown kinglets in winter of Maine, when he says "Our fragility in the cold makes these tiny creatures all the more miraculous"



Property of BirdNote

## **Comment From Kate Guenther, WCV**

I have seen them on my property.



## Raina Krasner, WCV:

think I'm pretty terrible at IDing songbirds, so who knows ... I may have seen them and not known!



## Chapin Hardy, WCV:

I thought it was interesting that Kinglets recognize family members by voice and are less inhibited to huddle with them than strangers.

## **Comment From Elaine VA VB**

I've seen the kinglets at the banding station at Kiptopeke State Park on the Eastern Shore.

## **Comment From Jay McLaughlin**

I thought I saw/heard one very, very high in a loblolly pine last week but I wasn't quick enough. Hopefully next time.



#### Raina Krasner, WCV:

It was interesting too that he never really found out what they do at night. I mean ... not definitively.

#### Comment From Lydia, PA ♥ S•x•? ♥

True. He never really did

#### **Comment From Kate Guenther, WCV**

Patient 14-2344, harrisonburg.



## Raina Krasner, WCV:

Hmmm.

## Comment From Lydia, PA ♥ S•x•? ♥

What happened to it Kate?



#### Amanda Nicholson, WCV:

Why did it come in?

## **Comment From Kate Guenther, WCV**

Unfortunately it died. the record looks like it has an error code for the admission, so I'd have to dig deeper.

## Comment From Kathy in NM ♥

Me too, Raina. I really hope that it isn't just "luck" that they survive each night.

#### **Comment From Jay McLaughlin**

They're so small - and I think they go very high in trees. Most small birds I see are much lower.

#### **Comment From Doris**

I'm in lurk mode since I haven't finished the book...



#### Raina Krasner, WCV:

That's ok! Welcome.

#### **Comment From Jay McLaughlin**

But he DID find out what they eat - I had the impression that was unknown before he figured it out. He is a character. Elite level ultra distance runner too.



## Raina Krasner, WCV:

Yes! I think so too. Well ... initially scientists thought they ate snowfles (aka springtails)



http://www.fcps.edu/islandcreekes/ecology/snow\_flea.htm



So odd. I wasn't familiar with snow fleas.



## Chapin Hardy, WCV:

I had never heard of them.



## Raina Krasner, WCV:

I had never heard of them before, and now I wonder if I've seen them before. Come on, snow! I want to look for snow fleas.



## Amanda Nicholson, WCV:

Yeah!

## **Comment From Kate Guenther, WCV**

It's always so odd when you see insects out in winter...



## Raina Krasner, WCV:

HOW do they survive. Oh wait. He talks about that!

## **Comment From BarbG**

I have never seen them in the snow in Michigan either



## Raina Krasner, WCV:

Remember what he says about "ladybirds" or ladybugs?



#### Raina Krasner, WCV:

Was anyone else creeped out when he describes them as flocking in the tens of thousands in his cabin?



## Chapin Hardy, WCV:

His cabin was infested with them!



## Amanda Nicholson, WCV:

And they came into bed with him ...

## Comment From Kathy in NM ♥

Oh gosh, yes!



## Raina Krasner, WCV:

And they tried to climb into his eye to get water?? No thanks.

#### **Comment From rejoyce**

I had never heard of snow fleas either. It as hard to believe the numbers of them he saw!!

#### **Comment From BarbG**

I couldn't imagine living there



#### Chapin Hardy, WCV:

My childhood friend had ladybugs in that happen to her in her room every winter.

#### Comment From Lydia, PA ♥ S•x•? ♥

ICK! Yes.....

#### **Comment From Doris**

Eww..

#### **Comment From Jersey Shore Amy**

Also guilty of not finishing. YET! But when we see robins in NJ in winter (they got the wrong memo), had been wondering what they are eating. Snow fleas? :)

## **Comment From Jay McLaughlin**

I wonder if snow fleas are more common in areas w/more snow cover. Here in Richmond it's rare.



## Raina Krasner, WCV:

I love ladybugs ... I have lots of them at my house. But I would be less than thrilled if they were climbing around my bed by the thousands.

## Comment From 33mama (•x•?

lol Must be a northern thing.



#### Chapin Hardy, WCV:

It gets pretty stinky.

## **Comment From Jay McLaughlin**

Here's a great line from Dr Heinrich at one point: "The diversity and abundance of winter wildlife in my cabin is not necessarily enviable."



Raina Krasner, WCV:

На

## **Comment From Jay McLaughlin**

He wrote that "we had an infestation by the thousands [ladybugs] and as a last resort my wife Rachel tried to vacuum them up with a Dustbuster."

## Comment From Lydia, PA ♥ S•x•? ♥

Right Jay. I do not envy him the diversity in his cabin

## **Comment From Jay McLaughlin**

He went on to say "Rachel is a biologist and a paragon of tolerance toward creatures."

#### **Comment From Kate Guenther, WCV**

Communal nesting!



Raina Krasner, WCV:

Yes!



## Raina Krasner, WCV:

And not to mention using someone else's "den" as their own.

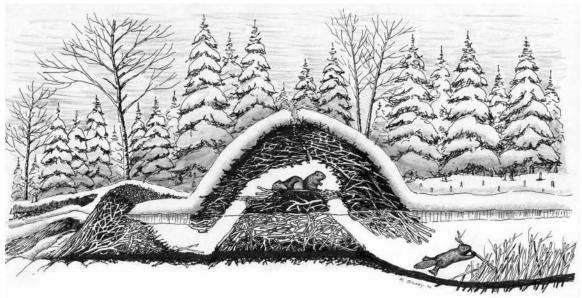
## **Comment From Kate Guenther, WCV**

Beavers share their winter lodges with frogs, mice and muskrats!



## Raina Krasner, WCV:

Yes! And they have really cool winter lodges.



http://www.adirondackexplorer.org/book\_reviews/why-the-adirondacks-look-the-way-they-do-a-natural-history

#### Comment From 33mama (•x•?

I thought it was really interesting that beavers eat under water all winter!



#### Amanda Nicholson, WCV:

I didn't realize they had such a huge stockpile of food right by them -- make sense though!

#### **Comment From Jersey Shore Amy**

I am happy just sharing my winter lodge with kids and dogs. :)

#### **Comment From Kate Guenther, WCV**

Party!

## **Comment From rejoyce**

I loved his illustrations they really helped with the reading.

#### Comment From Kandis-Renee from chesterfield va.

wait how do beavers a stay warm?



#### Raina Krasner, WCV:

They live in their lodge, usually with their families. They sort of huddle together.

## **Comment From Kate Guenther, WCV**

I love the den drawings in cutaway. Appeals to the hobbit in me.

#### Comment From Lydia, PA ♥ S•x•? ♥

I liked the illustrations too rejoyce



#### Amanda Nicholson, WCV:

It sounds like it gets pretty crowded in there. Good for warmth, bad for claustrophic beavers!

## Raina Krasner, WCV:

Sunar

crowded. And for many months at a time!

#### **Comment From Kate Guenther, WCV**

Lots and lots of beaver fat, waterproof fur... calories, den parties...

## Comment From cwerb ♥ Sozo? ♥ Sozo? ♥ Sozo? ♥

I don't think there are claustrophobic beavers.



## Amanda Nicholson, WCV:

That's a good thing for them.

## **Comment From Jay McLaughlin**

But beavers have to get OXYGEN! That's the biggie. You can store food/H2O for a while but O2 is what mammals can't do without.



#### Raina Krasner, WCV:

True

## **Comment From Jay McLaughlin**

Claustrophobia in beavers has no doubt been evicted by evolution.



True!

## **Comment From Kali - TX**

beavers are very smart builders



## Amanda Nicholson, WCV:

Another mammal I found really interesting was the snowshoe hare --



Raina Krasner, WCV:

Oh yes!



Raina Krasner, WCV:

I love them.



## Amanda Nicholson, WCV:

Their seasonal camouflage has to be timed just right!



## Chapin Hardy, WCV:

Very cool animal!



## Amanda Nicholson, WCV:

That's kind of a big gamble -- when do you go from brown to white -- to blend in?

#### **Comment From Kali - TX**

big feet



http://www.arkive.org/snowshoe-hare/lepus-americanus/image-G62176.html

#### **Comment From BarbG**

the timing of his fur change was interesting



## Raina Krasner, WCV:

From looking at pictures, it looks like their color change happens from the extremities inwards.

#### **Comment From rejoyce**

Yes, how do they know??? Timing is critical.

## Raina Krasner, WCV:

It has a lot to do with changes in light and temperature, but because of climate change, the changes in light do not necessarily correspond with the changes in temperature like they once did. So that means that snowshoe hares begin their changes in coloration, but their is not yet snow!

#### **Comment From Kali - TX**

i read an article recently that some snowshoe hares are having problems with the fur changing due to climate change. their "internal triggers" are being disrupted





Right -- I thought I remembered that somewhere -- about climate change messing with their timing.

#### **Comment From Kate Guenther, WCV**

Here's something I've wondered about. With some animals that change from brown to white in the winter, with less melanonin in the hair there is more air and thus is 27 percent more insulating than the summer brown fur. Why don't more animals turn white?



Amanda Nicholson, WCV:

Hmm!



## Amanda Nicholson, WCV:

I'm turning white (gray). Will that keep me warmer??



#### Raina Krasner, WCV:

I guess everyone evolves in their own way!

## Comment From Lydia, PA ♥ 5•x•? ♥

Pretty incredible

## **Comment From Jay McLaughlin**

"The timing of the genetically fixed color change of locally adapted hares necessarily reflects the historic patterns of when there was snow cover[...]"



## Raina Krasner, WCV:

Fascinating!

#### **Comment From Jersey Shore Amy**

Maybe it depends on where you are on the food chain? Smaller animals will change color.



#### Chapin Hardy, WCV:

The Short-tailed Weasel also does the seasonal fur change.



## Raina Krasner, WCV:

Perhaps.

## **Comment From Kali - TX**

i didn't know that the white hair was more insulating... interesting, kate

## **Comment From Jay McLaughlin**

He addressed the timing of the color change in significant detail.

#### **Comment From Kate Guenther, WCV**

Who turns white? Snowshoes, weasels...???



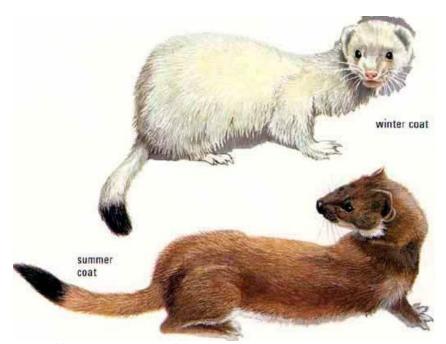
Snowshoes, weasels, Amanda, ummm ... who else?



http://goeddelphotography.com/portfolio/wildlife/weasels-martens/ermine-weasel-long-tailed/



Chapin Hardy, WCV: Sorry Long-tailed Weasels



http://www.factzoo.com/mammals/stoat-short-tailed-weasel.html



Raina Krasner, WCV: And short-tailed weasels.

## **Comment From Jay McLaughlin**

He talked about that black tip on the tail and how predators would go after that - and the animal would escape!



## Raina Krasner, WCV:

I thought that was so cool. How the hawks were somehow confused when weasels did not have the black ring on their tails.



## Chapin Hardy, WCV:

Yes! Hawks become confused which end is the head when there is a black tip.

## **Comment From Kate Guenther, WCV**

Are albinos warmer?



## Raina Krasner, WCV:

Kate is asking the hard-hitting questions. Should we all dye our hair white to be warmer? I'm game.

#### **Comment From Kate Guenther, WCV**

I'm game.

## **Comment From Jay McLaughlin**

Just like a 5 lined skink here in VA, blue tail to fool predators, it just breaks off, no harm done.

## **Comment From Jay McLaughlin**

Albinos and white animals are not the same. Snowshoe hares are not albinos.



#### Raina Krasner, WCV:

Well, right. I think she was just kidding:)

## Comment From 33mamaf•x•?

How about the animals that stop breathing for the winter?



## Raina Krasner, WCV:

Oh yes ... like who?



Chapin Hardy, WCV:

Wood Frogs!



https://biochemistrymorethantheeyescansee.wordpress.com/category/carbohydrates/



Amanda Nicholson, WCV:

Yay frogs!



## Amanda Nicholson, WCV:

[It's the year of the frog, so says DGIF]



## Chapin Hardy, WCV:

So the Wood Frog does something amazing!



## Chapin Hardy, WCV:

They freeze solid!



## Amanda Nicholson, WCV:

Other than their cool call?

## **Comment From BarbG**

I loved reading about the frog



## Chapin Hardy, WCV:

Which could be a big problem since ice crystals can destroy cells. So they accumulate large amounts of glucose!



## Chapin Hardy, WCV:

It causes the ice crystals to form OUTSIDE the cells and prevents them from being damaged.



## Chapin Hardy, WCV:

Check this out!

http://youtu.be/UvCdOXG2rPo

## **Comment From Kate Guenther, WCV**

Some kind of natural antifreeze for blood?



Chapin Hardy, WCV:

Exactly!

## Comment From Lydia, PA ♥ S•x•? ♥

Pretty amazing!

## **Comment From rejoyce**

I don't see how anything can freeze and live. I thought that was so interesting!!

#### Comment From cwerb ♥ (•x•? ♥ (•x•? ♥ (•x•? ♥

wow! and they blend in with the scenery very well too.

#### **Comment From BarbG**

great video -goes along with book well

#### Comment From Kandis-Renee from chesterfield va.

that is crazy but amazing

## **Comment From Jersey Shore Amy**

I am wondering who is doing research on how large amounts of glucose can help people in cold weather...

## **Comment From Jay McLaughlin**

He talked about that freezing solid process. Quite a feat. Difficult to comprehend (literally).



#### Raina Krasner, WCV:

So amphibians freeze ... and he focuses on another member of the herp community ...

#### Comment From 33mama (•x•?

Turtles!



## Amanda Nicholson, WCV:

turtles!!!!!!!!



## Chapin Hardy, WCV:

Snapping Turtles!



#### Amanda Nicholson, WCV:

Does that mean we're ready to talk about that great vocab word ...

## Comment From Lydia, PA ♥ \$•x•? ♥

Brumation refers to winter sluggishness and torpor of cold blooded animals, like reptiles and amphibians ---never heard that word before. I like to say it

## Comment From Lydia, PA ♥ S•x•? ♥

Oh My but fav new vocab word is Brumation. I like it



Raina Krasner, WCV: Love that word!





Raina Krasner, WCV: Hi adorable little snapper.

## Comment From Jersey Shore Amy And different turtles hibernate differently!



Raina Krasner, WCV: Absolutely.

## Comment From Lydia, PA ♥ S•x•? ♥

Torpid turtles under ice...like snapping turtles...who stay in the mud at the bottom of bogs until Spring, Heinrich said maybe the babies who hatch in Fall and then dig up from their nests to go to mud at the bottom of the bog/lake do not eat until Spring? Did I Miss something or is that right?



Amanda Nicholson, WCV:





Amanda Nicholson, WCV:

They live off of their yolk sac.



Raina Krasner, WCV:

Mom sets them up well.

Some turtles that hatch in the fall just aren't really ready for their world debut until the spring.

#### **Comment From Kali - TX**

i was not happy about his description of the snapper he found HBC on the side of the road, nor it's continued movement after death.



Turtles survive under water by remaining aerobic (use O2), but have anaerobic (don't need O2) metabolism. They have low metabolic needs for O2 since they remain inactive and lower body temperature, which makes for a low resting metabolism.

#### **Comment From BarbG**

I loved when he pulled the duck away from the turtle



#### Amanda Nicholson, WCV:

I hated that part. Least favorite part of the book. I think he demonized the turtle -- called it monster!



#### Raina Krasner, WCV:

Poor turtle. Just wanted to eat!

## **Comment From Kate Guenther, WCV**

Hike ducks.



#### Amanda Nicholson, WCV:

Sure, I like ducks. I don't think it's fair to interfere with the natural food chain of events though -- he even though thought he should feel guilty about denying the turtle it's final fall meal ... but he didn't.



#### Amanda Nicholson, WCV:

Turtles gotta eat!

## **Comment From rejoyce**

True

#### **Comment From Jersey Shore Amy**

I would not have gone anywhere near a snapping turtle!



#### Raina Krasner, WCV:

Probably a smart move, Amy.



#### Amanda Nicholson, WCV:

(Also I don't think a duck with a mangled foot went on to do well at all, so there's that.)

#### **Comment From Kali - TX**

Amanda, he mentioned that the snappers lay eggs away from the water, but i remember y'all releasing baby snappers into water.



They lay them out of water, but near the water. And then once the babies hatch, they head to the water.

#### **Comment From Jersey Shore Amy**

He pretty much assumed a torn web would heal...

#### Comment From Kate Guenther, WCV

It's hard sometimes not to take sides in the natural order of nature.



## Chapin Hardy, WCV:

The Snapping Turtle extends out its body to have as much skin exposed as possible to take up as much dissolved O2 in the water as it can.



http://ejklopfensteinfamily.blogspot.com/2010 12 01 archive.html

#### **Comment From Kate Guenther, WCV**

Very dinosaur-looking...

#### Comment From Lydia, PA ♥ S•x•? ♥

He also talked about some types of turtles, like map turtles (never heard of them) hibernate in depressions in river bottoms vs, digging into the mud like snappers or painteds. What is a map turtle? Never heard of that



## Raina Krasner, WCV:

They are pretty rare in Virginia.



## Raina Krasner, WCV:

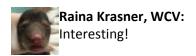
I'm actually not entirely sure of their status in general.

## **Comment From Jay McLaughlin**

Prehistoric. He talked about how long they've been around. A LONG time.

## **Comment From Kate Guenther, WCV**

And there is more O2 in COLD water than warm.





Hey, they're in parts of PA!http://www.paherps.com/herp...

## **Comment From Jay McLaughlin**

I just got a VA Turtle guide from our DGIF and it has map turtles in it. But I've never seen one.

#### Comment From Kandis-Renee from chesterfield va.

when does this end because I have school tomorrow. I don't want miss out on animal information though because is always good to learn about animals.



#### Raina Krasner, WCV:

We will archive this discussion, so you can always read back later!



#### Raina Krasner, WCV:

Just look for it on our Critter Cam archives page.

## **Comment From Jersey Shore Amy**

I would guess that Map turtles have very good sense of direction. :)



## Raina Krasner, WCV:

Ha!

#### **Comment From Jersey Shore Amy**

How about NJ?



## Amanda Nicholson, WCV:

Yep!http://www.state.nj.us/dep/...

#### **Comment From Kate Guenther, WCV**

HA!

#### **Comment From Jay McLaughlin**

VDGIF says "The Northern Map Turtle only occurs in the Powell, Clinch and Holston rivers of the upper tennessee river drainage in SW VA."

#### Comment From Lydia, PA ♥ S•x•? ♥

Oh thanks for the link. Had never heard of a map turtle.



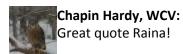
## Raina Krasner, WCV:

Although he had some controversial interactions with turtles, I did love his quote about hatchling turtles. ""Unlike the young of birds and mammals, turtles seem like complete and self-sufficient replicas of the adults."



#### Amanda Nicholson, WCV:

Which is why turtles are awesome.





Raina Krasner, WCV:

And his description was so spot on, I think. They are like little adults!

## **Comment From Kate Guenther, WCV**

Thanks, Jay!

#### **Comment From BarbG**

great quote

## **Comment From Kate Guenther, WCV**

Turtles look old even when young. No white hair, tho.



Chapin Hardy, WCV:

на



Raina Krasner, WCV:

Luckily. A hairy turtle would be .... odd.

## **Comment From rejoyce**

Love turtles!!!!!!!!

## **Comment From Kate Guenther, WCV**

Hey, how about the subnivian zone... now that was cool!



Raina Krasner, WCV:

Yes!



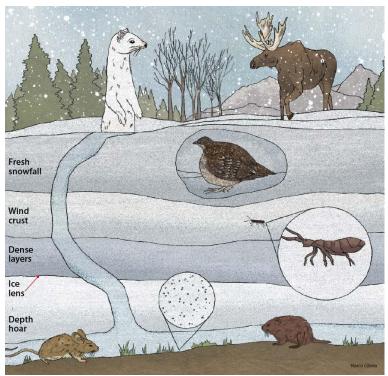
Amanda Nicholson, WCV:

Oh, super cool!



Chapin Hardy, WCV:

It's another world!



http://archive.audubonmagazine.org/truenature/truenature1011.html



I came across this article about that too --http://www.nwf.org/News-and...

## **Comment From Jersey Shore Amy**

Actually that was my favorite new work "subnivian"!

#### **Comment From Jay McLaughlin**

The grouse diving into the subnivian zone was fascinating. Amanda, nice use of "super cool."

#### **Comment From Kali - TX**

oh, i hadn't realized the sub nivian zone - that was cool!

#### **Comment From Jersey Shore Amy**

And now I know why I see trunks of young trees wrapped in orchards.



#### Amanda Nicholson, WCV:

Clarify this for me (because this was a ton of info and I didn't retain it all but I know that Master Naturalist Kate knows) -- subnivian zone: under the snow? Or at a certain depth under the snow?

#### **Comment From Kate Guenther, WCV**

Yeah. just "under the snow". If there is 6+" of snow it will stay at 32 degrees at the soil line...

#### Comment From Lydia, PA ♥ S•x•? ♥

I loved the illustration of the grouse. I had not clue they did that

#### **Comment From Jay McLaughlin**

wikipedia: "Subnivean climate refers to the zone in and underneath the snowpack. From the Latin for "under" (sub) and "snow" (nives). This is the environment of many animals that remain active during the winter. This zone provides protection from predators and insulation from the elements."



So cool. It's sometimes hard to think of snow as an insulating layer, but ... it is!

## Comment From Lydia, PA ♥ S•x•? ♥

On another note, I didn't know that some birds tunneled under the snow to spend the night or sit out a snowstorm. I liked the graphic of the ruffled grouse who tunneled under the snow to sit out a storm.



#### Amanda Nicholson, WCV:

I thought that was really interesting!

## **Comment From Kate Guenther, WCV**

There will be a thin line of water at the soil, so the animals get their water there.

## **Comment From Jay McLaughlin**

That's how igloos work! He talked about it!



#### Raina Krasner, WCV:

He did. I loved that description.

## Comment From Kate Guenther, WCV

Right.



## Raina Krasner, WCV:

Oh!! I have a fun video ...

## http://youtu.be/D2SoGHFM18I



#### Raina Krasner, WCV:

This fox using what I presume is magic to find mice under the snow.



#### Chapin Hardy, WCV:

Mind blown! Magnetic fields!

#### **Comment From BarbG**

truly amazing



## Amanda Nicholson, WCV:

I love watching them do that.



## Raina Krasner, WCV:

So cool!

## Comment From Lydia, PA ♥ \$•x•? ♥

Holy moly!

## **Comment From Jersey Shore Amy**

75% success rate is fantastic! Considering lots of energy expended...

#### Comment From 33mama (•x•?

Truly amazing!!!

## **Comment From Jersey Shore Amy**

This is great!!!

## **Comment From Mary E in NC**

Love the fox video!

#### Comment From Lydia, PA ♥ S•x•? ♥

Well that is what the wolves in our last book did too. Caught all thos mice in the winter!



## Raina Krasner, WCV:

Right!

#### **Comment From Kate Guenther, WCV**

Magic ears!

#### **Comment From Jay McLaughlin**

Also Farley Mowat's living quarters were overrun w/mice in a manner similar to Dr. Heinrich's.

#### Comment From Kandis-Renee from chesterfield va.

what was the last book y'all read?



## Amanda Nicholson, WCV:

Never Cry Wolf by Farley Mowat

## **Comment From Kate Guenther, WCV**

He ATE his mice!



Amanda Nicholson, WCV:

Yikes.

## **Comment From Kate Guenther, WCV**

I don't get it.



## Amanda Nicholson, WCV:

Get what?

#### **Comment From Kate Guenther, WCV**

I don't get what the north pole has to do with it! :-(



## Amanda Nicholson, WCV:

Me neither. But I may have missed something.

## Comment From Lydia, PA ♥ S•x•? ♥

I will now alwys wonder what is under the snow in my yard!



## Raina Krasner, WCV:

I think it's magic and magnets. And science. And things beyond me.

## **Comment From Jersey Shore Amy**

Me neither.

#### Comment From Lydia, PA ♥ S•x•? ♥

Magnetic field



## Chapin Hardy, WCV:

It helps the fox determine the direction and calculate its jump.

## **Comment From Kate Guenther, WCV**

Magnetic mice?



## Amanda Nicholson, WCV:

Buddy and the Magnetic Mice?



#### Raina Krasner, WCV:

Maybe mini magnetic fields formed under the snow?



## Raina Krasner, WCV:

Oh! Sweet band name.

## Comment From Lydia, PA ♥ S•x•? ♥

Hahahahaha



#### Amanda Nicholson, WCV:

Buddy has several band names ...

## **Comment From Kate Guenther, WCV**

I have found the paths of meadow voles as the snow has melted in my yard and their little latrines... I was so wowed.



## Amanda Nicholson, WCV:

So cool!



## Amanda Nicholson, WCV:

I don't think I'm nearly as observant as Master Naturalist Kate.



## Raina Krasner, WCV:

Nope.



#### Raina Krasner, WCV:

I've never seen a mouse latrine in my yard.



## Chapin Hardy, WCV:

If we are continuing to talk about mice, I thought it was interesting how chipmunks survived.



#### Amanda Nicholson, WCV:

True hibernators!



#### Amanda Nicholson, WCV:

I learned that from Kate.



## Raina Krasner, WCV:

Yes! She made an awesome display in the library last year.



## Amanda Nicholson, WCV:

Oh right!

## **Comment From EagleLove**

I like chippies



## Chapin Hardy, WCV:

They don't have anti-freeze in blood, but when body part gets too cold where it could freeze, they have a mechanism that "warns" them and they re-warm themselves before ice crystals form in their blood.



#### Raina Krasner, WCV:

Evolution is awesome.

#### **Comment From Mary E in NC**

Do all chipmunks hibernate? I see them all the time (now - in the winter!)



## Raina Krasner, WCV:

I believe they wake up when the weather is appropriate?

## Comment From Lydia, PA ♥ S•x•? ♥

They hiberante in a tunnel under our pool and come out when it is warm (chippies)

#### **Comment From Kali - TX**

i was confuzed about the chipmonks... he started saying that they don't really sleep all winter - they have stored food in their tunnels, so wake and eat so that they can be alert to avoid predators



#### Chapin Hardy, WCV:

He kind of explained it as a conditional thing. If they have a nice den and plenty of food, they will stay active. If not, they hibernate to reduce energy consumption.

## **Comment From Kate Guenther, WCV**

One theory is that they actually "wake up" to sleep, and to re-oxygenate their brains...



## Raina Krasner, WCV:

So fascinating. Waking up to sleep! Seems paradoxical.

## Comment From Kandis-Renee from chesterfield va.

how would they know when the weather is ppropiate



#### Manda Nicholson, WCV:

Some of the concepts are difficult to totally wrap your head around!

#### Comment From Kathy in NM ♥

I found the info on the arctic ground squirrel and supercooling interesting. It needs to wake itself up out of hibernation so it can warm up enough to live, and then it can go back to sleep - fascinating!



## Chapin Hardy, WCV:

They super-cooled!



#### Chapin Hardy, WCV:

Here is something cool: Squirrels that cooled their bodies to -2 degrees C saved 10 times the energy than those that cooled to 0 degrees C

## **Comment From rejoyce**

They sure can stuff those cheeks!!!

#### **Comment From Jersey Shore Amy**

Hey Amanda - I think we need a Jeopardy night to test our new vocabulary!



#### Amanda Nicholson, WCV:

True!

## **Comment From Lydia, PA ♥ ૧•••? ♥** Brumation!



#### Amanda Nicholson, WCV:

Anthropomorphism!



## Chapin Hardy, WCV:

HA.

## Comment From Kate Guenther, WCV

Sub Niviannnnn

## **Comment From Jersey Shore Amy**

Or a crossword puzzle!

## **Comment From Jay McLaughlin**

Diapause! Aestivation! Thermal hysteresis!

## **Comment From Jersey Shore Amy**

"Buddy and the Brumations"

## Comment From Lydia, PA ♥ \$•x•? ♥ LOL!



Amanda Nicholson, WCV:

What about some of the other animals that cache food?



Raina Krasner, WCV:

Yes!



Raina Krasner, WCV:

Oh, I know one!

## **Comment From Jersey Shore Amy**

Teenagers?

## **Comment From Kali - TX**

squirrels, beavers...



naturespicsonline.com



Amanda Nicholson, WCV:

Jay



Raina Krasner, WCV:

Gray Jay!



## Raina Krasner, WCV:

Who remembers what Gray Jays do to cache food?



Amanda Nicholson, WCV:

Spit!



Raina Krasner, WCV:

Yes. And ew! But cool.



## Chapin Hardy, WCV:

It was sticky and stringy, right?



## Raina Krasner, WCV:

Once exposed to air, it became tacky.

## **Comment From Mary E in NC**

Glue food to branches with saliva!

#### **Comment From BarbG**

acted like glue

#### **Comment From LindaSumerduck VA**

I found all the concepts fascinating and am inspired to investigate when we have snow!

## Comment From 33mamaf•x•?

Who stores seeds in woodpecker holes?



## Raina Krasner, WCV:

He did mention that woodpeckers are keystone species, since so many other animals use their holes as nests and food caches.



#### Raina Krasner, WCV:

He talked about deer mice! Living in woodpeckers holes.

## Comment From 33mama (•x•?

Yes!

#### **Comment From Kali - TX**

(that must have been one of the chapters i didn't finish, sigh)

#### **Comment From Kali - TX**

and wood peckers make holes for so many reasons... not just for nest or food



## Raina Krasner, WCV:

Right.

## **Comment From Jay McLaughlin**

Do all corvids cache food? I think they do.



## Raina Krasner, WCV:

I know our education crow caches food!

#### **Comment From Jay McLaughlin**

Pretty sure ravens do too but not positive.

## **Comment From Kate Guenther, WCV**

I think so, Jay.



## Raina Krasner, WCV:

So what else did we learn ...

#### **Comment From TerryMI**

I learned something new about bats. Some bats in the south go north to hibernate.



#### Raina Krasner, WCV:

Oh yes, sort of a reverse migration.

## **Comment From Jersey Shore Amy**

Wait, Jays are corvids?



## Amanda Nicholson, WCV:

Jay McLaughlin? I think he's a human.



## Amanda Nicholson, WCV:

Blue Jays and Gray Jays are corvids though. :)

## **Comment From EagleLove**

Jaz does?



## Amanda Nicholson, WCV:

For sure!

## Comment From Lydia, PA ♥ S•x•? ♥

Oh, one of the books I hope we do for a future bookd club is Gifts of the Crow!

#### **Comment From Kali - TX**

corvids are smart birds!

#### **Comment From Kate Guenther, WCV**

Jays, magpies, crows, ravens...

#### **Comment From Kate Guenther, WCV**

And a lot of them eat acorns, which cache well.

## **Comment From Jay McLaughlin**

Yes, Jays are corvids. So are magpies. Jay McLaughlin is human (and thus fallible).

#### **Comment From CarolynSC**

Interesting discussion, even though I wasn't able to read the book.



#### Raina Krasner, WCV:

Glad to hear your joining us anyway!



#### Amanda Nicholson, WCV:

Some corvids are probably smart enough get on the moderated discussion though  $\dots$  :)



## Chapin Hardy, WCV:

Jaz could do it! That will be my next training project.

#### Comment From Kali - TX

ok, amanda, jay is human, but should we know him? he's not a regular poster here, but you seem to know him.



#### Amanda Nicholson, WCV:

I don't, but I'm always happy to see some new names on the book club nights!!

## Comment From 33mama (•x•?

On tiny computers.

## **Comment From Raptor**

I am watching too and learning some things

#### **Comment From Jersey Shore Amy**

I already have Gifts of the Crow!



## Chapin Hardy, WCV:

I was amazed by the bees! I always wondered how they survived the winter. I had ideas, but clustering together wasn't one of them.



#### Raina Krasner, WCV:

Very interesting section on bees.

## Comment From Lydia, PA ♥ S•x•? ♥

Jay has bee a great part of this discussion. Glad you are here Jay



#### Amanda Nicholson, WCV:

Oh yes, that was really cool as well! I think there have been some Nature documentaries about the "bee dance" -- very cool to read about too.



## Chapin Hardy, WCV:

Bees tolerate body temps 12-15 degrees C (lower limits) anything lower they start losing physiological control.

#### **Comment From Kate Guenther, WCV**

Bees- stored food, comunal nesting, increased body fat...

#### **Comment From Kali - TX**

oh, chapin, i used to raise honey bees... they definitely huddle together in winter.



## Raina Krasner, WCV:

Ahh! So cool.

#### **Comment From Jay McLaughlin**

It's been great - thanks for having me. Dogs are now advocating for a walk and cannot be refused. See you next time - and thanks again!



## Raina Krasner, WCV:

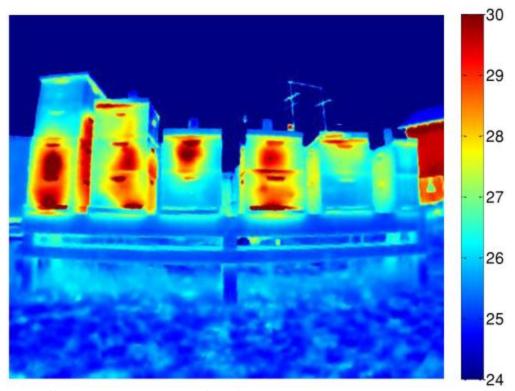
Thanks, Jay.

## Comment From Lydia, PA ♥ S•x•? ♥

I think I must have skimmed the part about the bees. I don't rememeber reading about them in this book

## **Comment From Kate Guenther, WCV**

See you, Jay!



http://www.opticsinfobase.org/vjbo/fulltext.cfm?uri=oe-19-1-399&id=209132



## Chapin Hardy, WCV:

So they cluster and use the same muscles they use to beat their wings to produce heat!

## **Comment From Kate Guenther, WCV**

Nice graphic, Chapin!

#### Comment From 33mama (•x•?

All that wing beating!

#### **Comment From CK in Pa**

The chapter about the bees was so interesting to me. I love honey and now even more.

#### **Comment From BarbG**

lots of new info about bees in winter-always wondered



#### Raina Krasner, WCV:

You realize how hard bees are working to make honey ... that we eat. Thanks bees!

#### Comment From 33mama (•x•?

The bees on the outer edge sacrificing themselves for the group.

#### Comment From LindaSumerduck VA

I cant remember do the hornets nests get rebuilt every year?



#### Chapin Hardy, WCV:

There are also ones that work extra hard to keep the larva warm!



### Raina Krasner, WCV:

The paper wasps? I believe so ... someone correct me if I'm wrong.

### **Comment From Kate Guenther, WCV**

Yep,

#### Comment From Kate Guenther, WCV

I wanna sleeping that red spot!

#### Comment From 33mama (•x•?

I kind of feel guilty eating honey! Taking it away from the bees!



#### Amanda Nicholson, WCV:

Like he said though -- they produce more than enough to get through the winter ...

#### **Comment From Kali - TX**

actually, if you raise bees and get close to the hive, you can "hear" them and pretty much know where they congregate in the hive.



### Raina Krasner, WCV:

Oh, have you raised bees Kali? Cool.



### Chapin Hardy, WCV:

I did some research and one bee can keep up to 70 surrounding pupae warm!

#### **Comment From Kate Guenther, WCV**

That's neat, Kali!

#### **Comment From Kali - TX**

yes, i have. back in the 70s and 80s... i love them!

### **Comment From Jersey Shore Amy**

Is there anything that does NOT huddle together in winter?



### Raina Krasner, WCV:

Yes! Bear ...



### Amanda Nicholson, WCV:

Another cool animal. I mean, in general, but particularly in learning more about their winter adaptations.

#### Comment From cwerb ♥ (•x•? ♥ (•x•? ♥ (•x•? ♥

bears do huddle! we saw that last year



#### Amanda Nicholson, WCV:

Well yes -- young ones, or sows and cubs. The family units do huddle.



### Raina Krasner, WCV:

Right. I remember as a little kid, I was taught that bears basically = hibernation! But as I get older, I learned it's not quite that simple.



### Chapin Hardy, WCV:

I find it amazing that bears will be inactive and not lose muscle or skeletal mass.



### Amanda Nicholson, WCV:

So many areas of study here -- that's what Virginia Tech's bear study is looking at (or, one of the things)



### Raina Krasner, WCV:

Human bones become weak and frail when we don't exercise!



### Chapin Hardy, WCV:

And how they do it is so fascinating!



#### Chapin Hardy, WCV:

Bears metabolize their fat and produce very little urea in their blood. The urea that is produced is converted to creatine, which is non-toxic.



### Chapin Hardy, WCV:

That contributes to why they don't urinate annnnd....

### **Comment From Kate Guenther, WCV**

annnnd what? Boom?



how they don't lose muscle mass. The creatine is recycled into protein prevents muscle loss. Lots of body builders take creatine to increase muscle mass, but the amount we would need to build and maintain muscle would be astronomically huge.

# **Comment From Kate Guenther, WCV**

oh, no boom.



Raina Krasner, WCV:

No boom.

# **Comment From rejoyce**

Did I read correctly that they eat the cubs poop?



Raina Krasner, WCV:

Right.



### Chapin Hardy, WCV:

Well it could be boom! Muscle "food" is made.

# **Comment From Kate Guenther, WCV**

True.

#### Comment From Kandis-Renee from chesterfield va.

I am back



Raina Krasner, WCV:

Cool!

### **Comment From Kate Guenther, WCV**

Deer don't really "huddle."



Raina Krasner, WCV:

True



### Raina Krasner, WCV:

They do make highways through the snow, though.

#### **Comment From Kali - TX**

but they do make "communal" sleeping areas in the winter, kate.

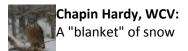
#### **Comment From Kate Guenther, WCV**

But they do lie down and let the snow fall on them and insulate them.



### Amanda Nicholson, WCV:

Again with that insulating snow!



### **Comment From Kate Guenther, WCV**

Right, Kali. Deer winter yards. But not close enough to conserve heat together, I don't think.



### Amanda Nicholson, WCV:

Not a full on "huddle". Like little tiny kinglets.

#### **Comment From Kali - TX**

snow is a great insulator! i remember building snow caves when i was a kid... they were really warm inside

#### Comment From cwerb ♥ Soxo? ♥ Soxo? ♥ Soxo? ♥

emperor penguins huddle in a massive circle taking turns as being in the center where it is the warmest

#### Comment From Kandis-Renee from chesterfield va.

I have a guestion why do animals hibernate in the winter?

# Raina Krasner, WCV:

Animals hibernate because it is too cold for them to remain active in the way they normally do during the warmer months. Their energy needs are too great, so they have to essentially "shut down' to continue. There isn't as much food available to sustain their increased energy needs.

#### Comment From 33mama (•x•?

Migrators might not need to huddle up!



### Raina Krasner, WCV:

Ah! Yes!



#### Raina Krasner, WCV:

The one I think of is the Monarch Butterfly.



### Raina Krasner, WCV:

I had no idea that someone initially tagged their little wings with contact information, and that is how we learned that monarchs migrate!



### Chapin Hardy, WCV:

It was cool how they traced where the butterflies were from by the milkweed they ate as caterpillars.



#### Raina Krasner, WCV:

Yes! The chemical markers.

### **Comment From rejoyce**

Me either!

# Comment From Lydia, PA ♥ 5•x•? ♥

Oh the story of the monarchs is fascinating. They had a feature movie about them at the VA Aquarium this past Spring. Fascinating



#### Raina Krasner, WCV:

I didn't know about that, Lydia. Very cool.

### Comment From Kandis-Renee from chesterfield va.

I did not know that butterflies ate milkweed I thought snakes did.



#### Raina Krasner, WCV:

Milkweed is a critical food for Monarch Butterflies. It's actually pretty toxic to most other animals.

#### **Comment From Kali - TX**

i've seen photos of the monarchs in mexico and south america, all clustered together.

#### **Comment From Kate Guenther, WCV**

The Monarch pupa eat the milkweed leaves.

#### **Comment From GN**

So if you churn milkweed you get butterflies?



Amanda Nicholson, WCV:

Hmm.



#### Raina Krasner, WCV:

Not quite ...?

### **Comment From Kate Guenther, WCV**

that's right, GN.



#### Amanda Nicholson, WCV:

If Kate says so ...

# Comment From cwerb ♥ Soxo? ♥ Soxo? ♥ Soxo? ♥

oh we get swarms of monarchs by the milkweed flowers



### Chapin Hardy, WCV:

You have to filter it first :p

#### Comment From cwerb ♥ ſ•x•? ♥ ſ•x•? ♥ ſ•x•? ♥

you once had a discussion on the differences between monarch and viceorys Raina. I hope you do that again someday. need a refresh on that

### Comment From Lydia, PA ♥ S•x•? ♥

Oh yes! I have ordered milweed plugs to plant this year. Essential to survival of the monarach. You have to get milkweed native to your region though

### **Comment From Kate Guenther, WCV**

Still, when I think about sheltering in a stand of pines, with a little snow for cover, tanked up on honeysuckle, with just a little heavier coat, it still seems mighty mighty cold to me.

### **Comment From Kate Guenther, WCV**

Those single digit night teach me what "bitter cold" really is!



#### Amanda Nicholson, WCV:

Right? Because we compare them to our [weakie] selves.



### Raina Krasner, WCV:

So weak.

### **Comment From rejoyce**

What did you all think about him killing crittersto iinvestigate and study them?

### Comment From Kathy in NM ♥

The "bugging" and killing of quite a few creatures bothered me throughout the book.

### Comment From 33mamaf•x•?

I didn't like the part about having to kill things to find out what happened inside them, but there is no other way to learn.



#### Raina Krasner, WCV:

Yes, Bernd clearly educated us on a number of important issues related to winter survival of wildlife. But ... how he got the information mgiht be a bit controversial.

#### **Comment From rejoyce**

On the one hand, he admires them so much, yet he didn't hesitate to kill them for research.

### **Comment From Jersey Shore Amy**

That's how they used to "study" basically everything in the past. But Bernd's research is recent. Relatively.

### **Comment From rejoyce**

Yes, that made me sad.

### **Comment From Kate Guenther, WCV**

Heinrich has been at this awhile. The naturalist ethic of his day was a little more old-school.



### Amanda Nicholson, WCV:

Some of it is unfortunate, but understandable -- as 33mama said, that's the way we learn and study things. I was not a fan of the cavalier way he acted with some animals though ... the snapping turtle thing that was mentioned earlier, the "pet" flying squirrel, banging away on trees to disturb flying squirrels, generally just being disruptive to some critters that are on a definite "edge".



### Amanda Nicholson, WCV:

That is true Kate ... it does seem a little more "old school".

#### **Comment From Kali - TX**

i did note that he mentioned that he had received permits for any killing or capturing



#### Amanda Nicholson, WCV:

Well, not for keeping a flying squirrel as a pet ...

### Comment From Lydia, PA ♥ S•x•? ♥

My least favorite part of the book was the story of his father and the pet weasel...did not like that much. He had found seven baby weasels, put them in a sack, walked away a bit then opened the sack. The momma came back and got back every one of her babies except that 7th. So his dad kept it as a pet. Then it ended up getting accidentally crushed when a person sat on a cover where it was hiding under. That made me mad



### Manda Nicholson, WCV:

Also didn't like that part. Of course, it was his father, not him, and we all know of stories like that ... but yeah, not really great (the accidental crushing was the rough part -- kind of cavalier about it)

### **Comment From Kate Guenther, WCV**

He has kept many wild "pets" as you'd see in his other books.



### Raina Krasner, WCV:

Like Bubo the owl?

### **Comment From Kate Guenther, WCV**

Yeah.



#### Raina Krasner, WCV:

What an ODD and inappropriate pet. And unimaginative name!

#### **Comment From rejoyce**

He had a lot of failed attempts with moths, caterpillars, etc.



### Raina Krasner, WCV:

He did, that's true. The caterpillars he tried to freeze during the pupa stage did not survive.



### Amanda Nicholson, WCV:

Yes ... some forgetfulness with the pupa!

### **Comment From Jersey Shore Amy**

I might want to selectively skip some parts as I finish reading?



### Raina Krasner, WCV:

Hmm ... perhaps.

### **Comment From Kate Guenther, WCV**

Inappropriate by today's standards...not so much then.



### Amanda Nicholson, WCV:

I'd say read it ... form your own opinions! Most folks have RAVE reviews, but these parts did bother me a bit.

#### **Comment From Kali - TX**

i think the pets may have been kept back before any protections or restrictions were in place. the story about his dad must have happened back in the early 50s

### Comment From Lydia, PA ♥ S•x•? ♥

I did not like that he felt he even had to tell the story of his father and the weasels. How did that realte the the subject of the book



#### Amanda Nicholson, WCV:

That's a good point. Didn't have to include it.



### Raina Krasner, WCV:

But, he DID also say that he thinks that there should not be restrictions of people touching or having contact with wildlife. Which is a bit extreme.

### **Comment From Jersey Shore Amy**

Maybe Bubo means something in another language?



### Amanda Nicholson, WCV:

It does -- it's part of the scientific name. But I think a lot of places have "Bubos. :)



#### Chapin Hardy, WCV:

"Most evils happen inadvertently, through not knowing and uniformed notions".

### **Comment From rejoyce**

Some of his stories really made the point that we've always made -- wildlife belongs in the wild whenever possible.

### Comment From 33mama (•x•?

Even though a few parts made me uncomfortable, there was a ton of interesting information in the book.

### **Comment From GN**

I think whenever you have the chance to mention weasels in a book, you should.

### Comment From Lydia, PA ♥ S•x•? ♥

I thought Congo should love that Heinrich describes that the Iroquois, native of NY state, discovered maple syrup from a SQUIRREL! A boy noticed a squirrel licking maple sap at a tree wound. The boy tried tasting the sap and found it sweet—and maple syrup was discovered. I never knew that. Loved that story ::)



### Amanda Nicholson, WCV:

Thank you, squirrels!

### **Comment From Kate Guenther, WCV**

And it is through experiencing nature directly that connection is made, especially for the young-- Last Child in the Woods, style.



#### Amanda Nicholson, WCV:

True. Though maybe not through lots and lots of inappropriate handling/keeping. I like laws/policies that protect wildlife. :)

### **Comment From Jersey Shore Amy**

The lesser of two weasels..



### Amanda Nicholson, WCV:

Weasels are pretty fun.

### **Comment From Kate Guenther, WCV**

Agreed.



### Chapin Hardy, WCV:

Speaking of reviews, how do we rate this book?

# Comment From Lydia, PA ♥ 5•x•? ♥

So, how are we rating this book?

### **Comment From Amie in Colorado**

I did almost quit reading after some of his actions, but I'm glad I finished it.



### Amanda Nicholson, WCV:

Remember, Goodreads scale!



### Amanda Nicholson, WCV:

Two -- it was okay, three -- liked it, four -- really liked it, five -- it was amazing

#### **Comment From Kali - TX**

3

#### **Comment From Jersey Shore Amy**

3

#### **Comment From rejoyce**

J

#### **Comment From Amie in Colorado**

2.5 to 3



### Raina Krasner, WCV:

I agree ...

### **Comment From Mary E in NC**

3

#### Comment From Kathy in NM ♥

I'm an avid reader, but I had to make myself read and finish this book. I'm glad I read it - learned quite a lot of fascinating info- but on the whole, this book was hard to get into and disturbing in many parts. I give it a 2.

### Comment From Lydia, PA ♥ S•x•? ♥

3 for me. Great information, sometime hard for me to stick with through the technical



### Amanda Nicholson, WCV:

I'd go 2.5 ish as well ... wish Goodreads did half stars!

### **Comment From CK in Pa**

3



### Chapin Hardy, WCV:

Sounds like three is the consensus.

#### **Comment From Jersey Shore Amy**

Maybe "like" and educational should be different scales.

#### Comment From 33mama (•x•?

Especially since he was a famous runner, Amie in Colorado!

#### **Comment From Kate Guenther, WCV**

Wow, I'd rate it much higher. I learned a LOT. 4-5.

### Comment From 33mama (•x•?

3



### Raina Krasner, WCV:

Interesting!



### Amanda Nicholson, WCV:

I did learn a good bit as well -- just some of the way he wrote things bothered me, and I couldn't get around that. But totally loved the kinglet stuff!

### **Comment From Kali - TX**

i agree with this comment, but i did enjoy parts... Comment From Kathy in NM ♥ I'm an avid reader, but I had to make myself read and finish this book. I'm glad I read it - learned quite a lot of fascinating info- but on the whole, this book was hard to get into and disturbing in many parts

### Comment From cwerb ♥ \$•\$•? ♥ \$•\$•? ♥ \$•\$•? ♥

that's a great point Jersey Shore Amy

### Comment From 33mama (•x•?

Would never have read this book if it weren't a book club selection.



### Amanda Nicholson, WCV:

Darn, and I forgot to post a couple other fun photos I had.

#### **Comment From GN**

I rate the discussion participants 5. Once again, I didn't read the book.



### Amanda Nicholson, WCV:

Oh, GN.



# Raina Krasner, WCV:

Glad we asked you to try something out of your comfort zone!



### Amanda Nicholson, WCV:

I do love book club for that reason!!

### Comment From Lydia, PA ♥ S•x•? ♥

I Love to read, but for some reason had to make myself stick with this and admittedly did end up skimming parts of it



### Amanda Nicholson, WCV:

So ...



# Amanda Nicholson, WCV:

Next online book club ... in April?



#### Raina Krasner, WCV:

Oh yes ... April book club.

### **Comment From rejoyce**

Soooooo what's our next book?

### **Comment From Jersey Shore Amy**

Drumroll...

### Comment From Lydia, PA ♥ S•x•? ♥

And the book is?

#### **Comment From Doris**

Yes!



#### Chapin Hardy, WCV:

I'm excited about our next book. Very appropriate since Valentine's Day is just around the corner.

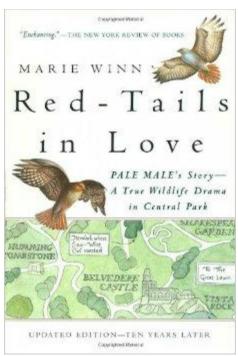
#### **Comment From Kali - TX**

we're waiting, raina!



### Amanda Nicholson, WCV:

Yeah!



Red-tails in Love by Marie Winn

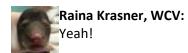
# **Comment From Kate Guenther, WCV**

Love. weasel style?



Amanda Nicholson, WCV: RTHA style!

### **Comment From Jersey Shore Amy** YAY!!!



Comment From Lydia, PA ♥ \$•x•? ♥

OH! That sounds interesting!

### **Comment From rejoyce**

Oooooooooo looks good!!!!

# **Comment From Kali - TX**

pale male story!

### Comment From CarolinaGirl \• x • ?

WOW! Love RTHAs!!

#### **Comment From BarbG**

I followed this hawk on cam

### Comment From cwerb ♥ \$•\$•? ♥ \$•\$•? ♥ \$•\$•? ♥

so appropriate for me..a pair just moved in to my back yard!

#### Comment From 33mama (•x•?

Sounds good!!! Maybe good enough for GN to read too!



### Amanda Nicholson, WCV:

We can hope.

#### **Comment From Doris**

I love the story of pale male!



# Chapin Hardy, WCV:

And dream

### **Comment From Kate Guenther, WCV**

How do birds kiss?



# Amanda Nicholson, WCV:

Maybe we'll find out.

### **Comment From Jersey Shore Amy**

Great story!

### **Comment From CK in Pa**

Oh, so looking forward to reading this.

### **Comment From Kali - TX**

GN doesn't read books...lol

#### **Comment From GN**

Oh, good grief.

#### **Comment From GN**

I mean, I can't wait!

#### **Comment From Jersey Shore Amy**

If it was about snakes I was going to have to go way out of my comfort zone.



#### Amanda Nicholson, WCV:

I accept that challenge! To find a good snake book ...

### **Comment From Kate Guenther, WCV**

Okay night all. Had fun!



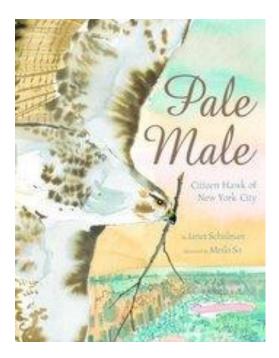
### Amanda Nicholson, WCV:

Thanks, Kate!!



### Raina Krasner, WCV:

And if you have children in your life ... encourage them to read a children's book about Pale Male along with you!





# Raina Krasner, WCV:

Pale Male: Citizen Hawk of New York City

#### **Comment From Doris**

Don't forget to use AmazonSmile to order the book!

### **Comment From rejoyce**

Great club!!

#### **Comment From Kali - TX**

thank you, kate! it was fun having you here!

### Comment From cwerb ♥ Soxo? ♥ Soxo? ♥ Soxo? ♥

GN wants a monkey book after this one..

# Comment From Lydia, PA ♥ S•x•? ♥

If you chose a Monkey book GN might read it



### Amanda Nicholson, WCV:

Remember, if you want to recommend books or peruse the past book club list, you can be "friends" with the Wildlife Center on GoodReads.https://www.goodreads.com/u...

#### **Comment From SAH**

I was not able to read the book, but I learned a lot lurking tonight! Thanks for the book club!

### **Comment From BarbG**

thanks for all the interesting discussion and for book club



#### Amanda Nicholson, WCV:

I'd still recommend reading the book -- as well as any past books! It is fun to be pushed outside of your normal reading comfort zone at times! And we're always happy to discuss any of our past book club books!

#### **Comment From PaulaR**

wow i've actually read this book already...loved it!



### Raina Krasner, WCV:

You'll be ready for book club then!

#### Comment From 33mama (•x•?

Thanks everyone!

### **Comment From Jersey Shore Amy**

Thanks for the video clips!

#### **Comment From Kali - TX**

thank you, raina! and amanda and chapin for a very interesting and educational evening.

#### **Comment From PaulaR**

Raina, yes, i'll be ready for the first time!



#### Chapin Hardy, WCV:

I've been looking forward to reading this one!

### Comment From Lydia, PA ♥ S•x•? ♥

Thanks all! and G'night everyone. Special thansk to our mods Chapin. Raina and Amanda!

#### Comment From 33mama (•x•?

Let's see...next meeting will be in April and you will let us know the date. Right, Amanda?



#### Amanda Nicholson, WCV:

Yes! We actually figured it out!



### Amanda Nicholson, WCV:

April 7!

#### Comment From cwerb ♥ ſ•x•? ♥ ſ•x•? ♥ ſ•x•? ♥

thanks all

### **Comment From CK in Pa**

Thanks for another great book club disscussion. Night all.

### **Comment From Mary E in NC**

Enjoyed the discussion - I learned a lot from the book and the comments! Looking forward to the next one. You all did a great job making it interesting! Thanks everyone!

### **Comment From GN**

I will read this book. Promise.



#### Chapin Hardy, WCV:

We have it in writing!



# Amanda Nicholson, WCV:

Oooh -- you saw it here, everyone!!!!



# Amanda Nicholson, WCV:

Can't wait.

### Comment From 33mama (•x•?

Great! I'm putting it on my calendar!

#### **Comment From PaulaR**

I came in very late...am looking forward to reading back. Thank you Amanda, Raina, and Chapin!



# Amanda Nicholson, WCV:

Night, everyone!

### Comment From 33mama (•x•?

Nite! SED

#### **Comment From Doris**

Nite y'all!

#### **Comment From Kali - TX**

you know we're going to hold you to that, GN!

### **Comment From Kali - TX**

night, amanda. thanks again to all



# Chapin Hardy, WCV:

Our pleasure! Night night folks!