Wildlife Center Classroom Series:
Going Batty for Bats

Wednesday, October 9, 2013

 Chapin Hardy, WCV:
Let's go Batty for Bats

Comment From Melinda in NC:
yay! ready!

Comment From MH in SC:
Present and ready

Comment From CarolinaGirl:
Ready!!

Comment From izzy2cool4u:
Ready!

 Chapin Hardy, WCV:
Good Afternoon everyone and thanks for coming to our monthly Wildlife Center Classroom Series. Today's lesson will be on an amazing creature that is often misunderstood: The Bat!

Comment From Nadine-U.P.,WA:
Hi Chapin all set in Washington

 Chapin Hardy, WCV:
Glad to have all of you! So lets get started!

 Chapin Hardy, WCV:
So let's first start off with what is a bat.

Comment From CarolinaGirl:
A mammal.

 Chapin Hardy, WCV:
Yes that's right! A bat is a mammal of the order Chiroptera and is the only mammal that is capable of true and sustained flight.

Comment From MH in SC:
Ohhh..Carolina Girl remembers that from lesson last year....cool!

 Chapin Hardy, WCV:
All bats fall under one of two suborders: Microchiroptera (little bats) and Megachiroptera (large bats)

 Chapin Hardy, WCV:
Microchiroptera: Kitti's Hog-nosed Bat/bumblebee bat- 1.5 inches/ 2 grams (smallest bat in the world.)


Credit: Daniel Hargreaves

 Chapin Hardy, WCV:
There are 17 families of microbats.

 Chapin Hardy, WCV:
Megachiroptera: Giant golden crowned flying fox – 5ft wingspan, 2.6lbs (largest bat in the world)

 Chapin Hardy, WCV:
There is only one family of megabats.

Comment Deb in SD:
How many species of bats are there in the world?

Comment From CarolinaGirl:
My mercy. That thing is big!

 Chapin Hardy, WCV:
It is! That bat has wings almost as tall as me! (I'm 6 ft tall)

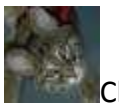
 Chapin Hardy, WCV:
Great question Deb in SD!

 Chapin Hardy, WCV:
Bats are amazing animals. There are more than 1,100 different species of bats. They are found everywhere around the world except the arctic, Antarctica, and a few isolated oceanic islands.

Comment From CarolinaGirl:
I've never seen a really large bat. Do they live around here (Southeast)?

 Chapin Hardy, WCV:
No there are no megabats in the US

 Chapin Hardy, WCV:
But In the US there are 47 different species of microbats, 15 of the 47 are found in Virginia!

 Chapin Hardy, WCV:
What are some species that you can think of?

Comment From flynflower:
Little brown bat

Comment From VA Kris:
Little Brown, Big Brown

Comment From Anna in VA:
Gray bat

Comment From Melinda in NC:
silver haired?

Comment From Melinda in NC:
oh!! Evening bat!

Comment From Guest:
Mean Old Bat (next door neighbor)

 Chapin Hardy, WCV:
Never heard of that species :p

 Chapin Hardy, WCV:
These are all great answers!

 Chapin Hardy, WCV:
So these are the species found in VA: Gray Bat, Small-footed Bat, Little Brown Bat, Northern Long-eared Bat, Indiana Bat, Eastern Pipistrelle, Big Brown Bat, Virginia Big-eared Bat

 Chapin Hardy, WCV:
These are all cave dwelling bats

 Chapin Hardy, WCV:
There is also the Southeastern Myotis,Silver-haired Bat,Eastern Red Bat,

 Chapin Hardy, WCV:
Hoary Bat, Northern Yellow Bat, Seminole Bat, Evening Bat, Rafinesque's Big-eared Bat

 Chapin Hardy, WCV:
There has also been an occurrence of the Brazilian Free-tailed bat in southeastern Virginia.

 Chapin Hardy, WCV:
These are all tree dwelling bats!

Comment From Nadine-U.P.,WA:
Does WCV receive many bats?

 Chapin Hardy, WCV:
Good question. We get some but before we get into bats of Virginia and the bats that have been admitted to the WCV, let's learn about some of their incredible adaptations.

 Chapin Hardy, WCV:
I've chosen three to discuss today.

 Chapin Hardy, WCV:
So what is the most obvious adaptation?

Comment From 33mama:
They fly

Comment From VA Kris:
It's a mammal that flies.

 Chapin Hardy, WCV:
Bingo! Their wings!

 Chapin Hardy, WCV:
So like VA Kris said bats are the only mammals capable of true flight. The flying squirrel may have fly in its name, but it actually only glides.

 Chapin Hardy, WCV:
If you are to look at a bat's wing, you will notice that it resembles a hand. Interestingly, the order that bats belong, Chiroptera, translates to "hand-wing."

Comment From VA Kris:
It's a mammal that flies w/ their HANDS!

 Chapin Hardy, WCV:
Kris you are on a roll!

 Chapin Hardy, WCV:
It has four fingers and a thumb, which are attached to an ulna and radius, which are attached to a humerus.

Comment From VA Kris:
:) I did homework...

 Chapin Hardy, WCV:
The actual wing itself, also known as the “patagium,” is a thin membrane of muscle and skin that stretches across and in between the bones. The thin layer of muscles control the shape of the bat’s wing while flying and is extremely flexible.

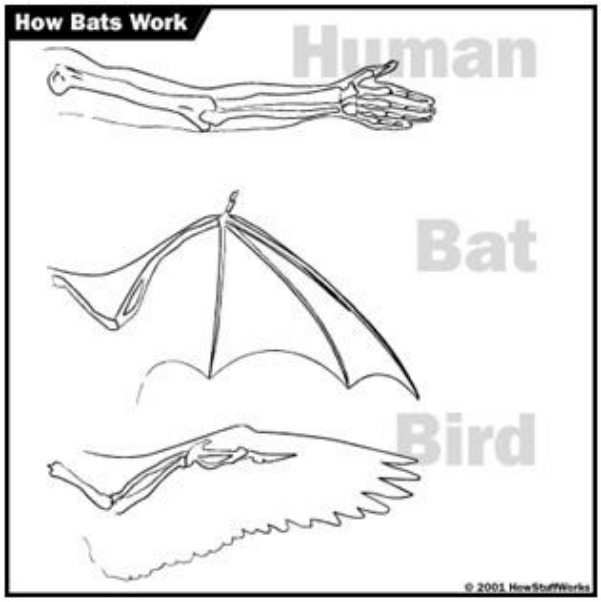
 Chapin Hardy, WCV:
Also because it has so many blood vessels and it is so thin, it can heal incredibly fast if torn or injured. This trait is particularly important because bats are so dependent on the ability to fly.

Comment From Nadine-U.P.,WA:
Always a teachers pet in one classroom. She probably brought an apple as well.

 Chapin Hardy, WCV:
I encourage participation. Everyone is welcome to contribute some.

 Chapin Hardy, WCV:
Now if we compare the wing of a bat to the wing of a bird, you will notice that they are very different. You will also notice how similar its structure to the human hand and arm.

 Chapin Hardy, WCV:
Here'e a photo to help!



Comment From VA Kris:
So is that the thumb on top?

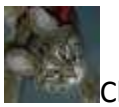
 Chapin Hardy, WCV:
Yes it is!

 Chapin Hardy, WCV:
Lets compare the bird wing and the bat wing

 Chapin Hardy, WCV:
The bird's wing is much more rigid and lacks "fingers." It also has the majority of its flight muscles located where the wing and body connect.

Comment From BarbG:
same names, different formations

 Chapin Hardy, WCV:
Exactly :)

 Chapin Hardy, WCV:
While the bird wing arrangement is better at creating lift, it lacks the maneuverability of the bat wing. A bat can change the shape of its wing very quickly which changes the degree and direction of lift.

 Chapin Hardy, WCV:
Why would this be a good thing for a bat?

Comment From Anna in VA:
They have to maneuver in the air to catch their prey.

Comment From katiesmom:
To be able to fly through very tight places?

Comment From flynflower:
to catch bugs

Comment From Vicki Phx AZ:
quick turns

Comment From BAC from Williamsburg:
Going after insects?

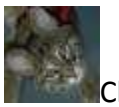
Comment From Melinda in NC:
those little insects can be hard to catch!

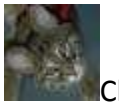
 Chapin Hardy, WCV:
YES YES YES! Very good. This especially important when hunting prey like fast flying insects or escaping predators.

Comment From CarolinaGirl:
Avoid predators

Comment From 33mama:
Bat needs to change direction quickly to fly at night and catch bugs while it is flying.

Comment From Diane in Waterloo, Ont:
Hi Chapin. I would say to avoid hitting things.

 Chapin Hardy, WCV:
That too haha

 Chapin Hardy, WCV:
Speaking of prey, how do bats find their prey? Especially since they are nocturnal and hunt at night!

Comment From flynflower:
Echolocation

Comment From Guest:
echolocation

Comment From VA Kris:
Echolocation has got to be the coolest thing a mammal could ever do...

 Chapin Hardy, WCV:
Very good y'all!

Comment From BAC in Williamsburg:
I saw a video on bats that showed a bat catching an insect in flight by catching it in a fold of skin between it's legs!

 Chapin Hardy, WCV:
While Bats do have acute sight, echolocation is the primary way that 70% of bats are able to know where they are going.

Comment From VA Kris:
But the big fruit bats use their eyes, right?

 Chapin Hardy, WCV:
That’s right not all bats echolocate, but let’s focus on the 70% for learning purposes.
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 Chapin Hardy, WCV:
Echolocation is the use of sound waves and echoes to determine the location of an object in space.

 Chapin Hardy, WCV:
Sound is made by air passing over your vocal chords. These vocal chords vibrate and thus produce sound. The sound then causes fluctuations in the air, producing waves.
 Chapin Hardy, WCV:
Bats make sounds the same way we do, by moving air past their vibrating vocal chords.

 Chapin Hardy, WCV:
Many bats produce sound from their mouths, however, some species have been found to make noise through their nose.
\Comment From MH in SC:
Chapin...don't bats have some kind of "internal radar" that works with the echolocation ?

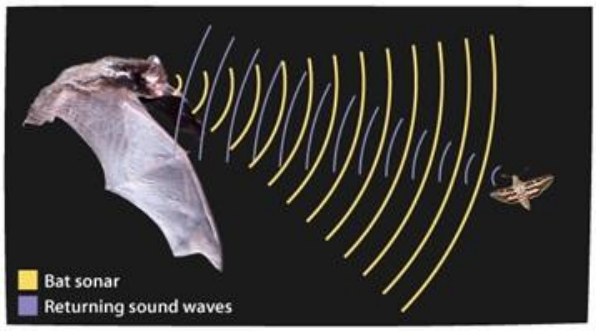
 Chapin Hardy, WCV:
In a way yes. I was just getting to that.

 Chapin Hardy, WCV:
So the bat produces a sound, usually as such a high pitch that humans cannot hear it. The sound then moves through space and then hits an object. The sound bounces off the object and produces an echo.

Comment From izzy2cool4u:
The sound bounces off things around then they calculate the distance of the sound

 Chapin Hardy, WCV:
Yes! The bat then listens for the echo and can then judge how far away an object is by the amount of time it takes to return.

 Chapin Hardy, WCV:
Here is a photo that demonstrates the basic principle of echolocation



Courtesy of http://askabiologist.asu.edu/echolocation

Comment From BarbG:
good picture of wing also

Comment From Anna in VA Anna in VA:
How do they determine prey from other objects?

 Chapin Hardy, WCV:
The bat can also tell the size of an object from the intensity of the echo. A smaller object will produce less of an echo than a larger object.

 Chapin Hardy, WCV:
They can also determine if the object is moving toward or away from the bat as well as if it is up, down, right, or left.

Comment From CAL:
It's hard to imagine that a mosquito could produce an echo.

 Chapin Hardy, WCV:
Its is but echolocation is so sensitive that it can detect an object the width of a human hair!

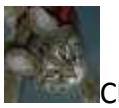
 Chapin Hardy, WCV:
Isn't that just amazing!?!?!

Comment From CarolinaGirl:
I find this totally amazing.Animals are awesome!

Comment From VA Kris:
Can you imagine what it's like to get the echo of a swarm?

Comment From BarbG:
unreal and amazing

Comment From Deb in SD:
They must send out a continuous signal when hunting their prey, since it is always moving?

 Chapin Hardy, WCV:
They know when to echolocate. They use it to get around. They do have acute vision but echolocation is like an added bonus

Comment From Sally in SoCal:
It's very amazing Chapin, I am so enjoying this class.

Comment From MH in SC:
So do they then fly and grab with their mouth, or catch with hands?

 Chapin Hardy, WCV:
A lot of bats will either grab it with their mouth or they will kind of scoop up the prey with their back feet and move it to their mouth. Kinda making a net in a way

Comment From MH in SC:
Chapin...what are some of the primary predators of bats, say in the Southeast?

 Chapin Hardy, WCV:
A number of animals. Owls, hawks, raccoons, fox

 Chapin Hardy, WCV:
So now the bat has used echolocation to find its prey, consumed it, and has gained energy to function. Let's move on to our final big adaptation.

Comment From izzy2cool4u:
Adapting to climate?

Comment From flynflower:
Hibernating in the winter?

 Chapin Hardy, WCV:
That's part of it. How they do it is the cool thing.. pardon the pun.

Comment From VA Kris:
conserving it's resources?

 Chapin Hardy, WCV:
Bats are Heterothermic endotherms.

Comment From Deb in SD:
what???

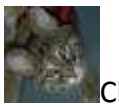
Comment From Melinda in NC:
huh?!

 Chapin Hardy, WCV:
yeah that’s a mouthful so let’s break it down.

Comment From Sally in SoCal:
Say that again? A what?

Comment From Lydia, PA(ʘ) ʕ•ᴥ•ʔ:
Heterothermic endotherms what a moutful! Back and scrolling back...

 Chapin Hardy, WCV:
Hetero= change or different, Thermic= temperature, Endo= produce, Therm=heat.

 Chapin Hardy, WCV:
So...A heterothermic endotherm is an animal that experiences changing or different body temperatures, but is able to produce its own body heat as well!

Comment From BAC in Williamsburg BAC in Williamsburg:
They can change their body heat?

 Chapin Hardy, WCV:
Yes. This adaptation has allowed bats to adapt to all sorts of environments.

Comment From Melinda in NC:
cool! Wish I could do that!

Comment From izzy2cool4u:
So they are never cold because they have a "thermometer" that keeps things level?

 Chapin Hardy, WCV:
Not quite.

 Chapin Hardy, WCV:
Bats produce their own heat, however, body temperature and metabolic rate are increased only during activity.

 Chapin Hardy, WCV:
When at rest, these animals reduce their metabolisms, which results in their body temperature dropping to that of the surrounding environment. It’s the best of both worlds really.

Comment From Anna in VA:
Oh, so that is how they can stand to be in an attic during summer heat!

Comment From Deb in SD:
That's handy--they can't just throw on a sweater! lol

 Chapin Hardy, WCV:
Bats will also do this behavior during colder temperatures (winter/night) and they often enter a state of torpor, which is like a short term hibernation.

Comment From izzy2cool4u:
I think they have a great adaptation there I'd like to borrow it during the winter!

 Chapin Hardy, WCV:
This is an amazing adaptation because it saves energy.

Comment From Anne in NoVa Anne in NoVa:
so they do this to stay warm in the winter while hibernating?

 Chapin Hardy, WCV:
Good question

 Chapin Hardy, WCV:
Bats have incredibly high metabolisms and must continuously eat to produce body heat. So when food becomes scarce in the winter or temperatures drop, they can slow their metabolism so they do not use up their valuable energy stores

 Chapin Hardy, WCV:
To the point that they can go for months with very little food, because they don’t waste energy to produce heat.

Comment From Deb in SD:
So when it get cooler, they lower their own body temp so it doesn't feel so cold to them?

 Chapin Hardy, WCV:
In a way yes, but they are hibernating

Comment From izzy2cool4u:
Chapin you mentioned bats are mostly cave dwelling that seems like it would be a cold space a lot of the time, does that mean they are frequently in and out of hibernation

 Chapin Hardy, WCV:
They can. I recently watched a documentary that showed male bats waking up in the dead of winter (mind you it is FREEZING) and seeking out females to mate.

 Chapin Hardy, WCV:
The females mate with the males and then have their pups in the Spring.

 Chapin Hardy, WCV:
Now that we have covered three adaptations that are found in many bat species, let's talk about what these animals eat.

 Chapin Hardy, WCV:
Bats can eat all sorts of things depending on the species.

 Chapin Hardy, WCV:
Bats can be insectivores (insect eaters) like the Little Brown bat

 Chapin Hardy, WCV:
Frugivores (fruit eater) like the Egyptian fruit bat

Comment From CarolinaGirl:
Well, I know we liketo have the insect eaters around!!

 Chapin Hardy, WCV:
Nectarivores (nectar drinking) such as the Mexican long-nosed bat

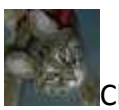
 Chapin Hardy, WCV:
Piscivores (fish eating) For example, the Fish eating myotis

 Chapin Hardy, WCV:
can be Sanguivore (blood eating) the most famous being .....

Comment From Millie:
Vampire bats

Comment From Deb in SD:
vampire bats

Comment From Melinda in NC:
vampire bats

 Chapin Hardy, WCV:
Yes the Common Vampire bat

 Chapin Hardy, WCV:
Ok quiz time: Which of these bat species do you think uses echolocation?

Comment From Deb in SD:
are there vampire bats in the US, or are they just in Europe?

 Chapin Hardy, WCV:
They are found in Central and South America

Comment From VA Kris:
The insect eaters for certain

Comment From Deb in SD:
Little brown bat

Comment From BAC in Williamsburg BAC in Williamsburg:
The insect eating bats

Comment From Lydia, PA(ʘʘ) ʕ•ᴥ•ʔ:
Little brown bat, Vampire and fish eating bat

Comment From Nancy Nancy:
All of them

 Chapin Hardy, WCV:
And Nancy gets the answer!

 Chapin Hardy, WCV:
Answer: All (Egyptian fruit bat is an exception to megabats not using echolocation)

Comment From Lydia, PA(ʘʘ) ʕ•ᴥ•ʔ:
What does Nancy win?

 Chapin Hardy, WCV:
Chapin brownie points

 Chapin Hardy, WCV:
I'm sorry I tricked you! The general rule, while there are always exceptions, is the microbats use echolocation and the megabats do not. Instead megabats rely on sight and smell.

Comment From Lydia, PA(ʘʘ) ʕ•ᴥ•ʔ:
(oh--I just called called away for a few---great class so far Chapin. will be back)

Comment From VA Kris:
Fruit bats are not megabats?

 Chapin Hardy, WCV:
Fruit bats are mega bats, but some use echolocation AND sight AND smell

Comment From Melinda in NC:
that makes more sense to me

Comment From VA Kris:
I like their big dark eyes

 Chapin Hardy, WCV:
Yes mega bats are some of my favorites!

 Chapin Hardy, WCV:
But I do love the micros. Let's be honest, I love all bats
Wednesday October 9, 2013 1:59 Chapin Hardy, WCV

 Chapin Hardy, WCV:
So now that we know what bats eat, how do you think that plays into their roles in the environment?

Comment From VA Kris:
I definitely need more bats at my house. Too many mosquitoes!

Comment From Deb in SD:
well the obvious benefit to insectivores is that they keep the bug population down!! yay!

Comment From BAC in Williamsburg BAC in Williamsburg:
They eat bad insects and pollinate fruit trees.

 Chapin Hardy, WCV:
Yes They help keep the insect population in check. A colony of 150 brown bats can consume enough adult cucumber beetles in one summer to prevent egg-laying that would produce 33 million of their root worm larvae, a major pest of corn (Whitaker 1995).

Comment From BarbG:
keep insects down

 Chapin Hardy, WCV:
Another great example is one little brown bat can eat up to 1000 mosquitoes in 1 hour!

Comment From Vicki in IL Vicki in IL:
They're spreadd seeds, pollinate.

 Chapin Hardy, WCV:
Yes! good job BAC in Williamsburg and Vicki in IL

 Chapin Hardy, WCV:
Nectar-feeding and fruit bats pollinate more than 130 genera of plants. Many of the flowers only bloom at night and bees are diurnal. So bats take their place.

 Chapin Hardy, WCV:
Some of these plants that are pollinated by bats produce fruits, nuts, and spices that we eat and use everyday such as banana, mangos, avocados, almonds, cashews, and cloves.

Comment From Anna in VA Anna in VA:
Bat guano is a good fertilizer too, right?

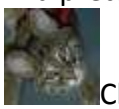
 Chapin Hardy, WCV:
Yes poop is rich in nitrogen which is a fantastic fertilizer!

 Chapin Hardy, WCV:
And of course prey for other animals.

 Chapin Hardy, WCV:
So you can see bats are pretty cool and pretty important.

 Chapin Hardy, WCV:
Bats have also played a significant role in science and the field of medicine! The reason we have sonar and development of certain vaccines and blood coagulation is because of research conducted on bats.

Comment From Vicki in IL Vicki in IL:
And pretty endangered in some places too, chapin.

 Chapin Hardy, WCV:
Yes indeed. A lot due to habitat loss and prejudice against bats.

 Chapin Hardy, WCV:
While we here at the Center LOVE bats, not everyone feels the same way.

 Chapin Hardy, WCV:
Unfortunately there are lot of stigmas and myths attached to bats. What are some of the ones you have heard?

Comment From Vicki in IL:
fly into your hair

 Chapin Hardy, WCV:
Yep! One myth is that they fly in people's hair or attack them. First and foremost bats don't want to be around humans and are going to fly away if they can. As for flying into people's hair, we all learned that they can use echolocation to maneuver through the air.

 Chapin Hardy, WCV:
They also have acute sight which they use with echolocation to avoid collisions and hunt prey. Remember they can sense things as thin as a human hair-they know where you are!

Comment From Nancy:
Rabies

Comment From Melinda in NC:
carry rabies

Comment From CarolinaGirl:
Rabies carrier.....true but most are fine I am sure.

Comment From BAC in Williamsburg BAC in Williamsburg:
We all know that bats can carry rabies, so how does the WCV deal with this?

 Chapin Hardy, WCV:
While bats can carry the rabies virus like all mammals, not all bats have contracted it. Only about half of one percent of bats has rabies. to answer your question BAC in Williamsburg :At the Center, only those that have been rabies vaccinated can handle and feed bats.

Comment From VA Kris:
rabies...but I heard that more cats transmit rabies than bats

 Chapin Hardy, WCV:
Yep. Less than .5% have rabies

Comment From Deb in SD:
they give people the "creeps" and they suck peoples' blood!

 Chapin Hardy, WCV:
While it does consume blood, it laps it up from a small cut and it’s very little. Vampire bat teeth are very sharp and because of that, animals rarely feel the bite.

Comment From Guest:
They'll bite you! (and suck your blood!!!)

Comment From Vicki in IL:
that vampire, suck your blood thing

 Chapin Hardy, WCV:
So only lapping up the blood.

Comment From Vicki in IL:
don't they feed off livestock mostly?

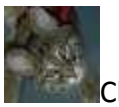
 Chapin Hardy, WCV:
A number will because livestock is so plentiful

 Chapin Hardy, WCV:
How about this one: Bats are rodents

 Chapin Hardy, WCV:
While they are mammals like rodents and sort of look like flying mice, they are actually more closely related to primates (Apes, monkeys, lemurs, as well as humans) than to rodents.

Comment From Nancy Nancy:
They do look like mice with wings!

 Chapin Hardy, WCV:
That blows my mind!

 Chapin Hardy, WCV:
I previously mentioned that I would talk about some of the bats that have been admitted to the Center. While bats are not the most common patient, so far this year we have had 35 big brown bats, 5 little brown bats, 1 silver haired bat, and 6 eastern red bats.

 Chapin Hardy, WCV:
Big Brown bat picture I took :)

Comment From Deb in SD:
oh my--he is cute!

Comment From VA Kris:
I love that little factoid!

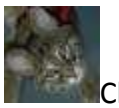
 Chapin Hardy, WCV:
The Little Brown Bat again

 Chapin Hardy, WCV:
Silver Haired Bat

Comment From VA Kris:
Look at those lovely ears

 Chapin Hardy, WCV:
Eastern red bat

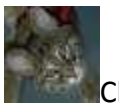
 Chapin Hardy, WCV:
Most of the cases were from entrapment in people's homes or buildings and few were from nest/habitat destruction. We have also had bats that have been hit by cars, found in glue traps, or pups that had fallen out of their roosts.

 Chapin Hardy, WCV:
Before I go any further, I do want to tell you what to do if you find an injured or orphaned bat.

Comment From VA Kris:
Eastern red bat looks like a hampster bat...

Comment From Deb in SD:
so baby bats are called pups?

 Chapin Hardy, WCV:
Yes a baby bat is called a pup

 Chapin Hardy, WCV:
First, make sure you protect yourself and wear leather gardening gloves or something that the bat can't bite through. For big brown bats, you might need double thickness because they are beetle eaters and have strong jaws.

 Chapin Hardy, WCV:
Next pick up the bat by scooping it up with some cloth-it makes them feel more secure. Never scruff a bat, it makes them very angry!

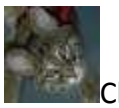
Comment From Vicki, Upstate NY:
Is it true that bats cannot take off from the ground?

 Chapin Hardy, WCV:
They can fly better if the can "drop" into flight

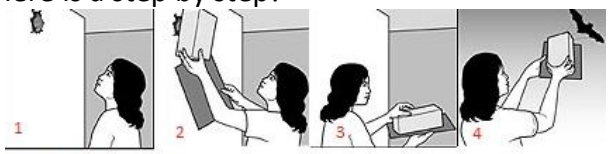
Comment From SalGal:
Why is the silver haired bat called that? Its hair looks black!

 Chapin Hardy, WCV:
Look at the hairs on the top of its head. Faint silver color

Comment From Janeinstpetefl:
That Big Brown bat is tiny and so cute. I see them before dawn here and am no longer afraid.

 Chapin Hardy, WCV:
If a bat is in your house, you should wait for the bat to be still and then use a container to cover it. Don't try catching it in the air-that can injure the bat. Next you can slip a piece of cardboard under the container, and slowly move it so that it is under it. Then you can walk the box outside and release the bat.

 Chapin Hardy, WCV:
Here is a step by step!



– Courtesy of batworld.org

 Chapin Hardy, WCV:
If you find a bat on the ground, take the same protective measures and wear thick gloves. If it is hairless or has very short fur, is unable to fly, and lying under what looks to be the entrance to a colony, it is probably a baby. This baby can be reunited with its mother.

 Chapin Hardy, WCV:
You can use something to gently lift the bat back to the entrance and it can crawl back in. If you can't reach the entrance, hang the pup in a cloth near the entrance and the mother may retrieve it. Leave it alone so that the mother will not feel threatened.

 Chapin Hardy, WCV:
Check on the bat (adult or baby) a few hours after sundown to make sure it is gone. If the pup has not been taken back by its mother a few hours after sundown, it has been abandoned and if left alone will probably not survive the night. Thus it will need to be brought to a certified wildlife rehabilitator.

 Chapin Hardy, WCV:
Here is also a video from the Save Lucy campaign that demonstrates how to capture a bat for transport outside or to a wildlife rehabilitator.

 Chapin Hardy, WCV:
http://www.youtube.com/watch?v=CcrC24eu_Q0

 Chapin Hardy, WCV:
I got a chance to talk to Amber, one of our rehabilitators (she ADORES bats) about how we care for them.
Wednesday October 9, 2013 2:19 Chapin Hardy, WCV
 Chapin Hardy, WCV:
Caring for bats can be a little more difficult than the average patient. When they are young they require formula specific for feeding and puppets to act as surrogates for the young bats.

Comment From MH in SC:
What kind of bats were those baby tee-tiny ones you fed with small syringe type thing?

 Chapin Hardy, WCV:
I believe Big Browns and Little Browns

 Chapin Hardy, WCV:
Here is the video of a baby bat being fed!

 Chapin Hardy, WCV:
http://www.youtube.com/watch?v=rJerIh6XdHE

Comment From Vicki, Upstate NY:
Do bats nurse their young?

 Chapin Hardy, WCV:
Yes

Comment From MH in SC MH in SC:
Their stomachs filled up like with a bulge, and almost turned translucent!

 Chapin Hardy, WCV:
Extern Piero feeding a baby bat!

 Chapin Hardy, WCV:
Also these patients need to be housed in appropriate soft-sided enclosures and may need humidifiers to best care for their sensitive skin.

Comment From Guest:
How do adult bats feed their young?

 Chapin Hardy, WCV:
They nurse them

 Chapin Hardy, WCV:
For some of the adult bats, we actually teach them how to eat insects out of a dish. The majority of the bats we get eat on the wing. As you can probably imagine, there aren't a whole lot of flying insects readily available to feed bats that come to the Center.

Comment From VA Kris:
The babies don't hang upside down?

 Chapin Hardy, WCV:
They cling to their mother and will hang upside down when she is out looking for food

 Chapin Hardy, WCV:
Anyways, we place the insects in a bowl and have the bat close by so that bat can hear the insects. Then we will present the bat with an insect and tap the dish so that is will begin to associate the dish with food.

 Chapin Hardy, WCV:
We will continue to move the bat closer and closer to the dish, taping the dish as we feed it. Then the bat learns that's where food is found. They are very intelligent and pick it up VERY quickly.

 Chapin Hardy, WCV:
Here is a video from savethelucybat.com that shows their voracious appetites and eating out of a dish.
http://www.youtube.com/watch?v=xKYh0sFfS2M&feature=c4-overview&list=UUs8cK_oCf3Tpc790-4Ta4XQ

 Chapin Hardy, WCV:
Now last year there were two bats that were admitted to the Center with signs of an increasing threat to the North American bat population as a whole.

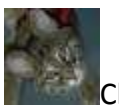
 Chapin Hardy, WCV:
Below are links to the story:
http://wildlifecenter.org/news_events/news/wildlife-center-treats-suspect-white-nose-syndrome-patients

Comment From Vicki in IL:
WHAT ABOUT WHITE-NOSE DISEASE?

Comment From VA Kris:
dreadful White Nose

Comment From Vicki, Upstate NY:
At the Bat World Sanctuary they also feed them meal worms, do you also do that?

 Chapin Hardy, WCV:
They get a variety of insects. Meal worms especially

 Chapin Hardy, WCV:
So White Nose Syndrome (WNS) is a syndrome that disrupts bats' winter hibernation and may cause white markings on the nose or other body parts. It is thought to be responsible for the deaths of 5.5 million bats since its discovery in a cave in NY in 2006.

 Chapin Hardy, WCV:
Courtesy of http://www.nwhc.usgs.gov/disease_information/white-nose_syndrome/gallery.jsp

 Chapin Hardy, WCV:
5.5 million is 80% of the bat population. It is unlikely that the population will recover quickly or recover to post WNS numbers because most bats are long lived (up to 30 years) and have a slow reproductive rate of 1 pup a year.

Comment From Vicki in IL:
AND IT IS SPREADING WEST QUICKLY

 Chapin Hardy, WCV:
In a 2011 study, Scientists for the U.S. Geological Survey proved the cause of WNS to be a fungus known as Geomyces destructans.
Comment From Anne in NoVa:
nose mold :9

 Chapin Hardy, WCV:
While the fungus does not kill the bat, it interrupts the bat's hibernation. The bats wake up and move towards the mouths of caves and will fly during the daytime. The bat then expends valuable energy stores and can die.

 Chapin Hardy, WCV:
The fungus can also cause lesions on the wings which not only allow bats to fly but also assist thermoregulation and fluid balance. It is highly contagious to other bats.

http://www.nwhc.usgs.gov/disease_information/white-nose_syndrome/gallery.jsp

 Chapin Hardy, WCV:
WNS not only has decreased the bat population, but it also has huge economic and ecological effects. It is estimated that each year bats contribute $3.7 billion to the US economy by eating insects that eat crops.

Comment From Eagles22:
Does White nose affect Va area bats?

 Chapin Hardy, WCV:
We think two patients that came in had it

Comment From VA Kris:
VA bats have been hit hard this year.

 Chapin Hardy, WCV:
That was last year for those two patients

 Chapin Hardy, WCV:
So what can you do to help bats?

 Chapin Hardy, WCV:
Spread the word about WNS and if you encounter it or suspect WNS, report it!

Comment From VA Kris:
Stay out of their caves

 Chapin Hardy, WCV:
Well if caves are closed please don't go in.

Comment From CarolinaGirl:
Leave them alone

Comment From Teegie:
Build a bat box?

 Chapin Hardy, WCV:
BINGO!

 Chapin Hardy, WCV:
Learn more about bats. The more you know and share with others gets the word out on how incredible and important these animals are to the environment. A great resource to use to learn more about bats, WNS, and see bat rehabilitation at work is the Save Lucy campaign!

 Chapin Hardy, WCV:
http://savelucythebat.org/

Comment From Deb in SD:
educate people

 Chapin Hardy, WCV:
Yes Teegie put up a bat box!

 Chapin Hardy, WCV:
With the human population continuing to expand, bats are losing habitat. By setting up a bat box, you can give these animals a place to live. Plus you get the added benefit of getting a colony of bats to eat up those pesky mosquitoes during the summer!

Comment From SalGal:
KINDLY remove them from your house, if they get in!

Comment From MH in SC:
I provide housing...:-)

 Chapin Hardy, WCV:
Knowing proper exclusion methods is also important. If you do have bats in your home and you want to remove them, wait until September. Mother bats will have their pups in the summer. If the adult bats are removed, the babies will be trapped inside and won't survive.

 Chapin Hardy, WCV:
You can find bat boxes at many bird stores or online
Wednesday October 9, 2013 2:34 Chapin Hardy, WCV

 Chapin Hardy, WCV:
So wait until September rolls around and the young are old enough to be on their own, you can place one way doors or flaps at the locations the bats are entering. They will leave in the evening and will not be able to re-enter. Once all the bats have left, you can remove the one-way doors and fill in the entrances with caulking or other building materials.

Comment From MH in SC:
Wildbirds Unlimited has them

 Chapin Hardy, WCV:
It is also important not to exclude bats during the winter because they are most likely hibernating. Removing them then would place them in the cold, with no roost and no food.

 Chapin Hardy, WCV:
Lastly, you can be a transporter to help us release bats back into the wild. Our very own Randy Huwa released three bats in Montpelier, VA and considered it to be one of his most memorable experiences of 2012.

 Chapin Hardy, WCV:
You can read his full account below: http://wildlifecenter.org/blog/2012-year-review-randy-huwa-executive-vice-president

Comment From Vicki, Upstate NY:
I have 5 bat nests under the roof of my front porch. Will they leave for the winter to find another nesting place, ie: old mill nearby? They have all the comforts of heat from the house and protection for the elements.

 Chapin Hardy, WCV:
You can use the exclusion techniques I mentioned and then they will find a new place to live. Possibly the old mill

Comment From David in VA.:
Where should bat houses be hung? I have one but doubt it's in the best place

 Chapin Hardy, WCV:
Some place where they won't be disturbed and away from your house because bats poop and it is very pungent

Comment From Teegie:
My grandson found plans on the internet and we plan to build one:) He is 12 :)

Comment From Nancy:
Batconservation.org has some great bat house plans and explains exclusion methods

Comment From Vicki, Upstate NY:
I don't want to move them just wondering if they would stay or go someplace else for the winter.

 Chapin Hardy, WCV:
If the colony is established there they will probably not move

 Chapin Hardy, WCV:
Well folks, that about wraps it all up! Thank you so much for coming to this month's Wildlife Center Classroom Series! I hope you learned a lot about bats and have gained an appreciation or have a new found appreciation on how amazing and complex these animals are.

Comment From Nadine-U.P.,WA:
Thank you Chapin for the bat class. I learned a lot. Have a great day

Comment From MH in SC:
Chapin....this has been a very interesting session today, a big thank you. I'm afraid work calls....geez, I hate their interruptions!! LOL

Comment From David in VA.:
Thank you Chapin this has been very informative.

Comment From VA Kris:
So, next time I see a bat flying around in broad daylight in February, I should report it. Report to who?

Comment From BAC in Williamsburg BAC in Williamsburg:
Thanks, Chapin!

Comment From Teegie:
Thank You Chapin :) Great Class:)

Comment From PaulaR PaulaR:
I missed the whole beginning of the class...looking forward to reading back. Thanks, Chapin!

 Chapin Hardy, WCV:
Its been my pleasure!

 Chapin Hardy, WCV:
VA Kris, sometimes bats will fly in broad daylight. Its doesn't necessarily mean something is wrong.

Comment From Deb in SD:
thanks for a wonderfully informative class, Chapin!

Comment From SalGal:
Great class, Chapin! Thanks for making bats a lot less scary!!!

Comment From Vicki, Upstate NY:
Excellent class Chapin, good job. Was very informative. You passed with flying colors..lol

Comment From Jane in Prescott AZ:
Bats are SO awesome. I worked at an animal shelter in Illinois for 17 years...we also did animal control and in "bat season", received so many calls, usually in the middle of the night; bats in the house. We tried to educate people, because so many are afraid of bats. Unfortunately since bats carry rabies, if found, say in a bedroom and the people woke up with a bat on their pillow, it would have to be rabie checked. I even got them in my house and they do scare you since they "swoop", but I knew how to get them out :) If they were brought into the shelter and were ok, they would "chill out" for a bit hanging upside down in containers until we could release them. Such interesting and cool creatures.

Comment From MH in SC:
Chapin...I was in New Mexico several years ago, and the big thing at disk was standing outside the bat cave to see millions of them fly out, and then over towards the plains of Texas. They literally darkened the sky, and the smell was terrible!! But a fascinating sight

Comment From Texas Gal Texas Gal:
Austin Tx has a cool cave you can go watch the bats fly out at night! it was so cool to watch them fly out by the hundreds...the hawks were waiting for them too! thanks for class today!

Comment From CarolinaGirl:
Thanks Chapin. Great class. I learned a lot!

Comment From Nancy:
I've seen plans for bat houses that go over your existing eaves which bats love to be in

 Chapin Hardy, WCV:
Remember bats want to be away from people, plus all that bat poop on your house is gonna get messy

Comment From katiesmom katiesmom:
and smelley - NOT conducive to sitting on the porch in the summer with an iced tea!

Comment From Candice Va Bch Candice Va Bch:
Learned more than I ever thought. Really cool.
Comment From Guest:
Thanks for the terrific class, Chapin. It was your first one...how do you feel?

 Chapin Hardy, WCV:
Like a million bucks! :)

 Chapin Hardy, WCV:
Ok everyone I enjoyed talking to all of you and teaching you about bats! I'm going to step away for now. There may not be moderators at this time.