

Title of Session: Nuts About Nature

Moderator: Bill Hilton Jr.

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Room: Tree House Conference Room

BillHi: We'll wait a minute or two for the Two-toed Sloths to arrive

BillHi: Didja know that sloths move so slowly and groom so poorly that algae grows on their fur?

BJB2 nods slowly

BillHi: AND that moths live in the fur and eat the algae?

KristinaGB: yum...I guess that's moth room service

BJB2: well, isn't that symbiotic!

BillHi: And that sloths only defecate once a week?

BJB2 laughs...now THAT'S a fact I could have lived without

BillHi: And that they have to come down to the ground to do it?

BillHi:Gee, I'm glad that cows don't fly.

KristinaGB: When ya gotta go, ya gotta go

BJB2 hopes Kristina is up for Bill's wonderful sense of humor

BillHi: Okay, enough of this scataogical discussion. It's time to get down to business.

KristinaGB: lol I hope so

BillHi: BJ?

BillHi: You're on.

BJB2: Welcome to Nuts About Nature, Kristina

KristinaGB: thank you

BJB2: we usually start the discussions with introductions so Bill has some juicy dirt on you

KristinaGB: oh dear

KristinaGB: you first?

BJB2 . o O (oops...so he knows who his audience is)

BillHi: It's not dirt, it's algae.

BillHi: Intros, please.

BJB2 waves hi. I'm an art teacher in Pennsylvania and a nuts about nature groupie

KristinaGB: I'm Kristina from Virginia. I am currently studying to be an English teacher (9-12), and I was tickled by the Nuts About Nature title

KristinaGB: plus I wanted to hear about this trip to Costa Rica

BillHi: Virginia where?

KristinaGB: Williamsburg

BillHi: And you're in school at?

KristinaGB: William and Mary

BillHi: Excellent.

BillHi: I'm Bill Hilton Jr., executive director of Hilton Pond Center for Piedmont Natural History in York, South Carolina.

BillHi: I taught high school and college biology for about 20 years and also travel the country giving talks about natural history topics and doing inservice and preservice teacher training.

BillHi: "Nuts About Nature" is a discussion aimed at helping teachers (and future teachers) use the out-of-doors--either for real or virtually--to excite students about learning science and other disciplines.

BillHi: Each month I select a topic for discussion that is intended to make you think and, in the end, to give you some ideas for implementing activities with your current (or future) students.

DavidWe joined the room.

DavidWe waves to Bill

BJB2 . o O (a very cross-disciplinary topic, Kristina)

DavidWe: Hi

KristinaGB -)

KristinaGB smiles

KristinaGB: hello David

BillHi: I had another topic in mind, but since everyone (i.e., Kristina) is hot and bothered to hear about Costa Rica, I guess I'll talk about that

KristinaGB: great

BJB2 looks forward to hearing more about the Costa Rica trip too

BillHi: Anyway, I went to Costa Rica.

BillHi: This question is for Kristina.

KristinaGB: shoot

BillHi: Without cheating in any way, tell me as specifically as you can where Costa Rica is.

KristinaGB: South America

BillHi: Okay, we have work to do.

KristinaGB: sadly, otherwise I'm not sure

KristinaGB: yeah

BillHi: let's start with Canada and go south.

KristinaGB: lol

BillHi: What country is after Canada?

KristinaGB: US

BillHi: An then . . .

KristinaGB: then Mexico

BillHi: And then

KristinaGB: Panama

DavidWe: Oooh, not quite, Kristina

KristinaGB: anyone care to help?

BillHi: Well, sounds like we're gonna have trouble from the other six countries in Central America.

BillHi: Panama is the last country in Central America.

KristinaGB: ah

BillHi: Then comes South America.

BillHi: What's the first country north of Panama.

BillHi: Hint. The initials are CR.

KristinaGB: lol

BJB2 smiles

KristinaGB: Costa Rica? Just a guess

BJB2 . o O (I wouldn't have passed this test either, Kristina.)

BillHi: But of course. (-:

BillHi: And Nicaragua is north of Costa Rica.

SarahWal joined the room.

BJB2: hi, Sarah. Welcome

BJB2: are you here for Nuts About nature?

KristinaGB: hi Sarah

BillHi: So just remember NCRP . . .

KristinaGB: okay

SarahWal: Hello, I am just curious to see how Tapped In works. I thought I would peek in on a chat if that's ok!

DavidWe: Welcome, Sarah

BillHi: So anyway, Costa Rica is the next to last country in Central America.

KristinaGB: okay

KristinaGB: silly question...

KristinaGB: where's Belize?

BillHi: You know where the Yucatan Peninsula is?

KristinaGB: yes...I believe so

BJB2: you've picked a great chat to peek in on, Sarah. Bill going to be telling us about a science trip to Costa Rica

BJB2 . o O (as soon as we get the geography correct)

SarahWal: I'm intrigued! I think I'll just sit back and read! I may not have much to add, though.

BillHi: That's the hump in Mexico that sticks up into the Gulf of Mexico.

KristinaGB -) I didn't actually take Geography in school.

KristinaGB: obviously

BillHi: Belize is east of there.

KristinaGB: okay, thanks

BillHi: While we're at it, there are three more Central American countries. What are they?

KristinaGB: Nicaragua

KristinaGB: Costa Rica

KristinaGB: and Panama

BillHi: No, there are three MORE after those and Belize.

KristinaGB: darn, I was hoping for the best

BillHi: El Salvador, Guatemala, Honduras.

BJB2 goes to study a map

BillHi: There, you now know ALL the countries that can be involved in "Operation RubyThroat: The Hummingbird Project." (-:

DavidWe: I've learned so much, ALREADY!

BillHi: Which is why I went to Costa Rica.

BillHi: Kristaina, have you ever seen a hummingbird?

KristinaGB: yes

BillHi: David? Have you?

BillHi: Sarah?

SarahWal: Only photographs.

BillHi: Sarah, where are you located?

BillHi: David, you too?

SarahWal: I am in Maryland, near Baltimore.

BillHi: Okay.

DavidWe: Sorry, Bill. Yes

BillHi: Where are you?

DavidWe: I have, in California

BillHi: And you are where now?

DavidWe: When I was playing pick-up soccer on the Berkeley campus...I'm in PA, north of Philadelphia

BillHi: Okay, everybody in the Tree House has something in common.

BillHi: All of us live where we could see a Ruby-throated Hummingbird.

DavidWe nods

BillHi: There are no ruby-throats in California.

BillHi: But there ARE other species there.

DavidWe recalls that there is a east half and a west half to the country

BillHi: Ruby-throats breed or migrate through the 38 eastern most states.

BillHi: And also in Canada.

BillHi: Are any of us likely to see Ruby-throated hummingbirds if we look out the window tomorrow?

KristinaGB: probably not

SarahWal: My guess would be no, that it is too cold.

BillHi: Good, Sarah.

DavidWe doubts it, but he does have access to a local birdfeeder

BillHi: Ruby-throats are cold-weatherwimps.

BillHi: They almost always depart the U.S. & Canada by mid-October.

BJB2: heck, I would be too if I could go to Costa Rica for the winter!

BillHi: The few that stay behind almost always perish.

BillHi: BJ . . .you're leading the witnesses.

DavidWe objects

BJB2 sits on her hands

BillHi: So, I was GONNA ask where they go, but

BillHi: Okay, BJ, I guess you think they go to Costa Rica. (-:

BJB2 blushes and apologizes.

KristinaGB: maybe El Salvador too

BillHi: And, of course, you're partly right.

BillHi: Ruby-throats migrate as far south as Panama but, contrary to popular thinking, they don't get into South America.

BillHi: They are found mostly in Mexico but also DO occur, Kristina in all seven Central American countries.

BillHi: So where do you think they might specifically overwinter in Costa Rica?

BillHi: Anyone?

BJB2: where there is plentiful food

SarahWal: that makes sense!

BillHi: Food is important and a given. I was thinking about specific kinds of habitats.

BillHi: Anyone?

BillHi: habitats?

KristinaGB: tropical forest...?

DavidWe: jungles

BillHi: Good try. let me respond.

BillHi: You, too, David.

DavidWe . o O (oh, please)

BillHi: Okay, here's some more Costa Rica geography info. CR one of the youngest countries in the Western hemisphere.

BillHi: Not politically, but geologically.

BillHi: It's only about 2 million years old!

SarahWal: so does that mean it's not as mountainous as other regions might be?

DavidWe raises his hand to ask a question

BillHi: Yes, David?

DavidWe: Is it that much younger than the surrounding countries?

DavidWe would be surprised by that

BillHi: Yes, David, you're right.

BillHi: Sarah, it's just the opposite.

DavidWe: That seems strange

BillHi: It's a young country, so the mountains are NOT worn down yet.

BJB2: is there a lot of volcanic activity?

BillHi: It's also a volcano-rich country, so it's actually getting taller!

BillHi: Now the curious thing about it is that the volcanoes are like a backbone to the country.

DavidWe: and that activity really stops at the borders with Nicaragua and Panama?

BillHi: No.

BillHi: But CR is MORE active.

BillHi: And younger.

DavidWe: Cool!

DavidWe . o O (way cool)

BillHi: So there's this backbone of volcanoes (mountains) that runs down the center of the country sort of northwest to south east.

BillHi: And the northeast side of the mountain is on the Caribbean . . .

BillHi: And the southwest faces the pacific.

BillHi: the eastern side gets all the warm Caribbean breezes and is tropical forest . . .

BillHi: The western side gets cold breezes from the Pacific and is much drier.

BillHi: east side: Tropical Rain Forest.

BillHi: West side: tropical DRY Forest!

BillHi: So, I'll ask my question again.

BillHi: In which of those habitats would you be likely to find Ruby-throated hummingbirds?

BillHi: Not BJ.

BillHi: (-:

BJB2 laughs.

BillHi: Sarah?

BillHi: Kristina?

BillHi: David?

SarahWal: Not knowing much, but guessing I would say the east side, the warmer tropical rain forest? After what you said about many perishing who stay behind where it's colder.

BillHi: Good try.

BillHi: Anyone else?

BJB2 waits quietly

BillHi: Kristina?

BillHi: David?

KristinaGB: how cold is cold?

KristinaGB: on the west side

BillHi: Why, Kristina?

BillHi: Cold is below freezing, which it doesn't get to in CR.

KristinaGB: what sort of temperatures would there be on the west side

KristinaGB: as compared to the east?

BillHi: temperatures are the same. The difference is moisture.

KristinaGB: okay

SarahWal: oh I see now.

BillHi: Sarah's logic was good; you'd expect ruby-throats to be on the balmy, moist east side.

BillHi: But it's wrong. (-:

BillHi: They're on the west side.

BillHi: And you'd never guess what a major factor is.

BillHi: Or would you?

SarahWal: So they travel pretty long distances- from the eastern US to the western part of Costa Rica.

BillHi: Any guesses?

BillHi: Yes, Sarah.

BillHi: It's about 3,000 miles.

KristinaGB: better beaches?

BillHi: yes, they are.

BJB2: . o O (cuter lifeguards)

BillHi: Okay, for lack of time, here's the deal.

BillHi: Costa Rica has 55 species of hummingbirds!

KristinaGB: they need their own niche?

BJB2: wow!

BillHi: yep. The only one that is migratory is the Ruby-throat.

BillHi: So the 54 resident species have all the "good" habitats staked out.

BillHi: When the ruby-throats arrive in fall, they have to go where they can get to the food, and that appears to be on the wets side.

BillHi: west.

BillHi: There are other hummers there, but not very many species.

BillHi: People thought that meant the west side habitats were "marginal"

BillHi: But I found LOTS of Ruby-throats on the west side when I went to CR in December and January.

BillHi: It might be marginal there for the other 54 species, but it's winter heaven for ruby-throats!

BillHi: nay questions?

BJB2: you might want to mention the purpose of going to CR, Bill

BillHi: I'm gonna. (-:

BillHi: Any questions?

SarahWal: You said they depart the US in Oct. When do they return?

BillHi: About 1 April or so. BTW, ruby-throats are smaller than many of the other CR hummingbirds.

BillHi: So they might be able to get by on small flowers that wouldn't support bigger hummers.

BillHi: Let me show you how small I mean.

SarahWal: So if they are smaller they really do have to take what's left over as far as habitats that are available

BillHi: Maybe. Or maybe we should say they're adapted for feeding on smaller flowers.

BillHi: Go to <http://www.hiltonpond.org/ThisWeek050101.html>

BillHi: Just click on that URL.

BillHi: Scroll down to the first photo.

KristinaGB: how many hummingbird species are there in the 38 eastern-most states?

BillHi: Everybody see the photo?

KristinaGB: yes

BillHi: One that breeds here. Only ONE.

BillHi: Everybody hold up your thumb.

BJB2: . o O (Bill's photos are remarkable)

BillHi: That's about how big a ruby-throat is.

BillHi: So you can see the flowers are quite small.

SarahWal: that's pretty amazing!

BillHi: Please bookmark this page and come back and peruse it at your leisure. it will take a long time to read the account of how I took two groups of teachers to Costa Rica to catch and band ruby-throats and study their behavior.

BillHi: I'm going again this November if you want to go!

KristinaGB: cool

BillHi: I was the first person EVER to systematically capture and band Ruby-throated hummingbird in CR.

BillHi: That's because all the other hummingbird researchers wanted to work with the 54 other "exotic" non-migratory hummingbird species!

BillHi: Thanks for coming. Any questions?

SarahWal: Thanks for letting me peek in and participate! It was quite interesting!

BillHi: Notice the map, Kristina? (-:

KristinaGB: how do the hummingbirds know how to get to Costa Rica?

BJB2: can't wait to see if any of the birds Bill banded show up in the US

KristinaGB: I mean, I can't even tell you where it is

BillHi: We'll never understand migration, but that's a good topic for a later "Nuts About Nature"!

KristinaGB: oh

KristinaGB: and do hummingbirds have birdsongs?

BJB2: Bill also has a group in Tapped In

BillHi: Hummers do vocalize. I wouldn't call it a song. (They also hum, of course.)

BJB2: and a wonderful newsletter

BJB2: . o O (they hum because they don't know the words)

BillHi: <http://www.hiltonpond.org/ThisWeekMain.html>

BillHi: They also do karaoke.

KristinaGB: amazing!

BillHi: Gotta run. I must fly to Univ. of Arkansas tomorrow myself for SEVEN hummingbird talks in three days.

KristinaGB: Good Luck!

BillHi: See everyone next month?

BJB2: thanks, Bill. I look forward to it

KristinaGB: I'll study a map

SarahWal: Thanks again!

KristinaGB: and if it's successful, see you then

KristinaGB smiles

BillHi: (-:

BJB2: Bill's group is Environmental Education

BillHi: Thanks, BJ.

KristinaGB: bye! Thank you

BillHi: Bye.

BJB2: thanks for joining us, Kristina!

KristinaGB: thank you