Monday, November 15, 2010

8:00 PM: **HOST**: Hi Allen
8:00 PM: **Allen**: HI

8:00 PM: **Bill**: Well I haven't observed any white tail deer in any hunts this week, Im guessing their is some anti predator (me) behavior that could explain that, lol
8:01 PM: **Chris**: has entered the room.
8:01 PM: **HOST**: chuckle! I saw a doe and a fawn this morning and a buck this evening
8:01 PM: **Allen**: I saw an attempt by a hawk to catch a smaller bird midflight - wasn't successful
8:01 PM: **Chris**: Good Evening everyone
8:01 PM: **HOST**: Hi Chris

8:02 PM: **HOST**: Allen, that sounds unusual, usually it is falcons that hunt for birds
8:02 PM: **Denise**: I saw what looked like a dominance-type altercation among some white-tail females this morning, but I wasn't sure if white-tails have a dominance hierarchy, or if they were simply being snippy
8:02 PM: **Ellen**: has entered the room.

8:03 PM: **HOST**: Denise, remember what we learned about a dominance hierarchy being dependent on how stable is the group?
8:03 PM: **HOST**: Hi Ellen
8:03 PM: **Ellen**: hello
8:03 PM: **HOST**: So what will it be this eve? "nature red in tooth & claw" (hunting) or function of red deer behavior?
8:04 PM: **Denise**: Yes, it's a pretty stable group, we introduced one new female at the beginning of the semester but it hasn't changed since then
8:05 PM: **HOST**: Denise, good observation
8:06 PM: **Fiona**: has entered the room.
8:06 PM: **HOST**: In this Part 4 of the course, we are covering the easiest topics last: Hunt & escape, foraging & storing, and home-building (colonies)
8:06 PM: **HOST**: Hi Fiona
8:06 PM: **Fiona**: Hello!
8:07 PM: **HOST**: For those of you reading Dugatkin, did you find a mismatch between the reading and the lecture notes in Unit 10?
8:08 PM: **Chris**: The topics are similar but the perspective is different. The grad reading is from the prey's perspective as opposed to the hunter
8:09 PM: **George**: has entered the room.
8:09 PM: **HOST**: Hi George
8:09 PM: **HOST**: Chris, good critical thinking
8:10 PM: **HOST**: maybe we need to back up a bit this eve....lets get a head count on who has had a chance to finish the reading for Unit 10?
8:10 PM: **Bill**: I lack about 5 pages
8:10 PM: **Denise**: I have finished the reading, but I'm reading Halliday
8:11 PM: **Chris**: I finished
8:11 PM: **Rafael**: i finished it
8:11 PM: **Allen**: I finished
8:11 PM: **Helene**: i finished
8:11 PM: **Ellen**: done
8:11 PM: **George**: has entered the room.
8:11 PM: **Fiona**: done
8:12 PM: **HOST**: Okay, good. So we should have antipredator behavior pretty well covered.
8:12 PM: **HOST**: Lets see what you remember....
8:13 PM: **HOST**: Q10.6 What are examples of anti-predator behaviors with the following
functions: camouflage, redirect attack, fight back?
8:13 PM: Rafael: I'll go with the bombadier beetle for fight back
8:14 PM: Fiona: camouflage is to become "cryptic" such as the cuttlefish
8:14 PM: HOST: yes, those are good examples
8:15 PM: HOST: are you having difficulty finding an example for "redirect attack"?
8:15 PM: Denise: My example of redirecting the attack was the orb spider
8:15 PM: Rafael: by "redirect attack" are you referring to the prey approaching the predator or blackbirds mobbing?
8:15 PM: Chris: Would tail flagging be an example of redirect attack?
8:15 PM: Denise: The orb spider placed "decorations" on its web that would be attacked by the wasps instead of the spider
8:15 PM: HOST: Denise, can you help us out on this one, do you remember an example of redirect attack from Halliday?
8:16 PM: Denise: I did not, most of Halliday I felt like focused on the hunter
8:17 PM: HOST: I'm thinking the wording in this question needs to be changed
8:17 PM: Fiona: What about grizzly sows?
8:18 PM: Fiona: When boars attack cubs, the sow will redirect the attack to herself.
8:19 PM: HOST: Fiona, that would be social escalation; here we are talking about coevolution of predator and prey species
8:19 PM: Ellen: what about an anole losing its tail in an attack
8:20 PM: Allen: Would warning coloration be an example?
8:20 PM: HOST: Ellen, yes, that would be a good example. The predator eats the wiggling tail and the anole lives to grow a new one.
8:21 PM: HOST: Allen, I think warning coloration would be a good example of "passive escape"
8:22 PM: Ellen: warning coloration is tricky
8:22 PM: Denise: would the orb spider be an example of redirecting the attack?
8:22 PM: HOST: In lecture, the example of redirected attack is the frog with "eyespots" on its rear, re-directing attack to the less vulnerable portion of the body
8:22 PM: Bill: how about a copepod squirting a bioluminescent spray one direction as it retreats the other way
8:22 PM: Ellen: Brazilian toad
8:23 PM: HOST: Denise, tell us more about your thinking on the orb spider?
8:23 PM: HOST: Ellen, thanks for the species ID. Bill, that sounds like a good example
8:23 PM: Denise: the orb spider places decorations in its web so that when wasps come to attack they attack the decorations rather than the spider
8:24 PM: HOST: Yes, that would be a good example. I'm thinking this question needs to be reworded so "redirected attack" is changed to "escape after detection"
8:24 PM: HOST: what are your thoughts?
8:25 PM: Allen: Makes sense
8:25 PM: Fiona: That would help
8:25 PM: Ellen: yes
8:25 PM: HOST: I would welcome a PS!
8:26 PM: HOST: Lets move on to the next Q that usually sparks a good discussion: Q10.5 Why has co-evolution resulted in a "predator-prey arms race"?
8:27 PM: Rafael: because natural selection favors prey that are able to escape predation, so predators are then selected for their ability to catch prey
8:28 PM: HOST: Pg 394 in Dugatkin
8:29 PM: HOST: pg 43 in Halliday
8:29 PM: HOST: examples?
8:31 PM: Ellen: teh birds that are able to pick out non-poisonous monarchs
8:32 PM: Chris: The ground squirrerels have coevolved with gopher snakes. Dugatkin did not mention how the snakes have changed, but the squirrels emit alarm calls and mob snakes
8:33 PM: Allen: I think a classic example, not mentioned in the book, is the evolution of defensive spikes and armor on trilobites during the Cambrian explosion
8:33 PM: Bill: This wasn't in the book but when carp are introduced to a pond with pike the pike feed on larger carp. After a few generations the carp become deeper bodied so that the gape
limited pike can't feed on them
8:33 PM: **Bill:** then the pike will shift to feeding on more, but smaller carp
8:34 PM: **HOST:** good examples! and good critical thinking
8:35 PM: **HOST:** the example in lecture is about the coevolution of speed in ungulates, speed/ambush in predators; group defense in ungulate; group hunting in carnivores
8:36 PM: **HOST:** lets do another head count....who has been able to view the videos in lecture Unit 10?
8:36 PM: **Ellen:** not I
8:36 PM: **Fiona:** I haven
8:36 PM: **Rafael:** just the first one
8:36 PM: **Chris:** I havent
8:36 PM: **Allen:** I have
8:36 PM: **Bill:** not yet
8:36 PM: **Helene:** I have not
8:36 PM: **Denise:** They wouldn't all load for me, I was going to send you a PS but wanted to see if it was my internet first
8:36 PM: **George:** not yet
8:37 PM: **DENISE:** I haven't been able to give it a second go yet, so I'm still not sure if it was my internet or the videos
8:37 PM: **HOST:** OK a treat awaiting most of you. I guess just be aware that these questions for this unit match up better to lecture than to the reading assignment
8:38 PM: **HOST:** so lecture covers important hypotheses (in my opinion) that happen to be overlooked by these particular textbook authors
8:39 PM: **HOST:** lets focus on this Q since it ties in with the coevolution of anti-predator behavior: Q10.3 For a solitary-hunter species of your choice, describe search, chase and capture stages of the hunt?
8:40 PM: **HOST:** drawing a blank?
8:41 PM: **Denise:** i used the ant lion in my example
8:41 PM: **Ellen:** nice
8:42 PM: **HOST:** Denise, that sounds intriguing, please elaborate
8:43 PM: **Denise:** the ant lion digs a hole with steep edges in the sand, and then when ants approach it may throw sand at it or cause a landslide that forces the ant into the hole, and then the sides are too steep for the ant to escape
8:44 PM: **Fiona:** I was thinking along the lines of a hawk who circles searching for their prey, when their prey is spotted they swoop down to kill it.
8:44 PM: **Denise:** oh got it
8:44 PM: **HOST:** Denise, good description
8:45 PM: **Ellen:** sorta like star wars return of the jedi
8:45 PM: **HOST:** Fiona, good example of a visual hunter
8:45 PM: **HOST:** and Allen, what would be the difference between a falcon and a hawk in terms of the pursuit style?
8:47 PM: **HOST:** In lecture, the examples are the garter snake "track stars" and the death adder "passive tail lure"
8:48 PM: **Allen:** Oh man, I think a falcon is more maneuverable and faster in the approach and better at catching airborne prey. Hawks are bigger and go after ground prey.
8:49 PM: **HOST:** good description! thin winged "fighter jets" vs. broad winged "bombers"
8:50 PM: **Allen:** 20 years in the Air Force finally paid off
8:50 PM: **Ellen:** lol
8:50 PM: **HOST:** chuckle!The point here is that the coevolution of predator and prey results in different adaptations at each stage of the hunt....and we need to be really specific
8:51 PM: **HOST:** ready to move on to another Q?
8:51 PM: **Fiona:** Sure
8:51 PM: **HOST:** Q10.4 What is an hypothesis about the evolutionary history of hunting behavior in a taxonomic group of your choice? (TIP: compare solitary hunters with group hunters)
8:52 PM: **HOST:** any one have a favorite taxonomic group for this? felines vs. canines?
8:53 PM: **Fiona:** Canines
8:53 PM: **HOST:** my fave! so what would be examples of species in the categories of solitary, semi-social and social?

8:54 PM: **Fiona:** Solitary would be a fox

8:54 PM: **Denise:** foxes, coyotes, and african wild dogs?

8:54 PM: **HOST:** good

8:54 PM: **Ellen:** foxes are vulpes though

8:55 PM: **Denise:** vulpes?

8:55 PM: **HOST:** close, Denise.....if you are thinking of Africa, then it would be jackals instead of coyotes

8:55 PM: **Denise:** i was thinking globally haha

8:55 PM: **Ellen:** branch off of canidae

8:55 PM: **Denise:** oh, thank you

8:56 PM: **HOST:** yes, the foxes branched off from the ancestors of Canis a very long time ago

8:56 PM: **HOST:** and the African painted dogs are a different genus "Lycaon"

8:56 PM: **Ellen:** yes

8:57 PM: **HOST:** so if we are thinking in terms of north america, what would the species be?

8:57 PM: **Allen:** coyote?

8:57 PM: **Ellen:** c. lupis

8:57 PM: **Fiona:** Wolves for a group hunter

8:58 PM: **HOST:** I agree! coyotes diverged at the beginning of the pleistocene (1 mill years ago) and wolves diverged half way through the pleistocene ice ages ( 500, 000 years ago)

8:59 PM: **HOST:** So, our chat time has about come to an end. Anything else before we sign off?

8:59 PM: **Fiona:** no thanks

8:59 PM: **Chris:** I'm good

9:00 PM: **Rafael:** good here

9:00 PM: **HOST:** have a good evening!

9:00 PM: **Helene:** night

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**Wednesday, November 17, 2010**

8:00 PM: **HOST:** Hi Isabelle!

8:00 PM: **Isabelle:** hello Dr. Packard

8:01 PM: **Sophia** has entered the room.

8:01 PM: **HOST:** Welcome back, Sophia!

8:01 PM: **Sophia:** Hi!

8:02 PM: **HOST:** I’ve been giving coaching comments on A3 deer inquiry....were either of you planning on uploading a draft for feedback?

8:03 PM: **Sophia:** no not yet

8:03 PM: **HOST:** have you had a chance to get started on it?

8:03 PM: **Isabelle:** I should be done with it by this week I all ready did part one

8:04 PM: **Isabelle:** I am on Model 2

8:04 PM: **HOST:** good! did you find the sources on the library course reserve?

8:04 PM: **Isabelle:** no

8:05 PM: **Isabelle:** are they articles

8:06 PM: **HOST:** we were chatting in class and I learned that folks had not found the zipped folder of sources attached to the elearning assignment....then when we looked, the most important one by Clutton-Brock was missing....so I put two articles and a bibliography on course reserve

8:06 PM: **Isabelle:** so far I have found some good article in web science

8:06 PM: **Teresa** has entered the room.

8:06 PM: **HOST:** good, which ones did you like?

8:06 PM: **HOST:** Hi Teresa!

8:06 PM: **Isabelle:** oh yeah! I got today

8:06 PM: **Teresa:** good evening all

8:07 PM: **Isabelle:** I found this one that talk about why female choose a male that has a high
8:07 PM: **HOST**: Teresa, we were just chatting about the sources for A3 on the library course reserves, and others that Isabelle found
8:08 PM: **HOST**: Isabelle, that is a good article, isn't it curious, because the theory predicts that the females would prefer older males (good genes) with a low pitch!
8:10 PM: **Teresa**: is this for the last module that is due dec 6th?
8:10 PM: **Isabelle**: yes
8:10 PM: **HOST**: Teresa, yes, Module 2 is about proximate perspectives and module 3 is about ultimate perspectives, so the two pretty much go hand in hand.
8:11 PM: **HOST**: Isabelle, did you pick up on the function of the low pitch in the male calls?
8:12 PM: **Isabelle**: on the videos that you posted on the web page
8:13 PM: **HOST**: did you notice that when the male roared near the females, his head was up and the pitch of his call was higher than when he was going after the other male and he roared with his neck outstretched?
8:15 PM: **Teresa**: was he stretching his neck out to make himself appear larger than the other male? maybe the high pitch is a gentler sound than the low, aggressive sounding pitch he exhibited towards the male?
8:15 PM: **HOST**: yes, they have shown that when the larynx is stretched longer, it results in a lower pitch
8:15 PM: **HOST**: and lower pitches are more intimidating to other males
8:15 PM: **Isabelle**: I am sorry I have to clearly something I just open the article and it said that female preferred a high to low roaring rate
8:17 PM: **HOST**: Isabelle, good point, that is a different article, pretty interesting that females also prefer males that roar alot, what would be your hypothesis about the internal state of hormones that influence rate of roaring?
8:19 PM: **Isabelle**: could it be that the more they roar the better genes they have they are more healthy???
8:19 PM: **Teresa**: or that they are prepared to mate>
8:19 PM: **HOST**: well, I was thinking more about the cause perspective, the mechanism of internal state
8:19 PM: **HOST**: would you hypothesize it would be elevated estrogen? cortisol? testosterone?
8:20 PM: **Teresa**: estrogen for the male because he is trying to entice the female?
8:20 PM: **Isabelle**: it lets the male know when the female its ready to mate with him more
8:21 PM: **HOST**: what is the mechanism of estrogen in males?
8:22 PM: **HOST**: don't we usually think of estrogen in females and testosterone in males?
8:23 PM: **Teresa**: yes that is what i was thinking but thought maybe the male was using estrogen to get the female to want to mate with him more
8:23 PM: **Isabelle**: it lets the male know when the female its ready to male
8:23 PM: **Isabelle**: mate*
8:23 PM: **Sophia**: wouldn't him roaring more be due to testosterone?
8:23 PM: **HOST**: Sophia, I agree
8:24 PM: **Teresa**: i would think so to but the males also have estrogen in their systems
8:24 PM: **Sophia**: well yes, but i don’t think it plays a role in excessive roaring for mates
8:25 PM: **HOST**: In the articles by Clutton-Brock (on reserve), it shows the elevated testosterone in males during the season of rutting activity
8:25 PM: **Isabelle**: that it true they do have estrogen but in a much lower level
8:26 PM: **Isabelle**: I am looking at the article and I realize that one of the pages its upside down
8:26 PM: **HOST**: Maybe you have learned from a more recent source, but my understanding was that dihydrotestosterone converts into estradiol in the brains of male mammals and is associated with actual mounting behavior in contrast to the escalation behavior associated with testosterone
8:27 PM: **HOST**: do you have sources that report on estrogens circulating in the blood of male mammals?
8:27 PM: **Teresa**: i don't have articles for the estrogen in males blood but thought that they had some levels in their bodies
8:28 PM: HOST: OK. thanks for clarifying
8:29 PM: HOST: has anyone picked up on what are the environmental stimulus that controls the estrogen increase in females, associated with courtship and ovulation?
8:31 PM: Sophia: are you talking about the lions?
8:31 PM: Sophia: would it be the roaring of the males?
8:32 PM: HOST: yes, there is an article about how the stimulus of roaring male red deer speeds up the breeding activity in the females
8:32 PM: Isabelle: The article that i have it Red Deer behavior and ecology of two sexes and I am trying to find that information. But I am sorry but some of the pages are upside down its this the article that talks about estrogen and testosterone
8:34 PM: HOST: Yes, there should be a graph in there about the male testosterone cycle. The article about effects of male roars on female cycles is more recent. It is linked to the [background information for students] on the Prey Inquiry website
8:34 PM: Isabelle: ok
8:35 PM: HOST: Sophia, there is one more stimulus that influences female breeding cycle.
8:36 PM: HOST: It is the same as influences the seasonal migrations in birds...do you remember back to Part 1 of this course?
8:36 PM: Sophia: is it something internal inside of them?
8:36 PM: Sophia: like an instinct?
8:37 PM: HOST: remember, when we use the cause perspective, the word "stimulus" means something in the environment outside the body of the responder
8:37 PM: HOST: Here is a clue. If you played male roars to females in the summer, do you think they would come into breeding condition (estrus)?
8:38 PM: Sophia: probably not
8:38 PM: Teresa: i am looking the articles up now
8:38 PM: HOST: why not?
8:39 PM: Isabelle: may be not but it will probably get theme stimulated to get into estrus
8:39 PM: Sophia: because they aren't physically ready
8:39 PM: HOST: and what cues do animals use that influence them to be physically ready for seasonal behaviors like migration and breeding?
8:40 PM: Sophia: the seasons
8:40 PM: Sophia: weather
8:40 PM: Teresa: it says that they are 'brought into oestrus earlier' when the males are roaring more
8:40 PM: HOST: Thanks, Teresa, what is the author and date on that source?
8:42 PM: Teresa: Charlton 2007
8:42 PM: HOST: thanks!
8:43 PM: HOST: Sophia, weather is correlated with photoperiod. It is actually the photoperiod that reptiles, birds and mammals use in seasonal activity cycles.
8:44 PM: HOST: This was demonstrated dramatically to me when I was a grad student on the wolf project
8:44 PM: HOST: Dr. Seal surgically removed the pineal gland from a male white tail deer
8:45 PM: HOST: the deer showed summer coat in winter and winter coat in summer! not very adaptive
8:45 PM: Sophia: hmm interesting
8:45 PM: Teresa: we have used light cycles in the laboratory to help simulate seasons for western fence lizards to get them to mate
8:46 PM: Teresa: havent been too successful but we did get it to work a few times
8:46 PM: Isabelle: that cool
8:46 PM: HOST: Teresa, interesting! In unit 11 we will be learning about how photoperiod influences the seasonal foraging behavior of grizzly bears
8:46 PM: Teresa: that will be very neat to learn about
8:47 PM: HOST: really changes the metabolism so that they "can't eat enough" at the end of the summer, then they won't eat at all once they go into hibernation
8:47 PM: Sophia: unfortunately i'm gonna have to get off a little early tonight, my ride is here to pick me up and take me home...see you next week!
8:48 PM: HOST: actually, next wed. is vacation!
8:48 PM: Sophia: oh yeah, so 2 weeks from now
8:48 PM: Isabelle: bye Rachel
8:48 PM: Sophia: goodnight!
8:48 PM: HOST: bye!
8:48 PM: Sophia has left the room.
8:49 PM: HOST: Did you have any Q's about Unit 10 Hunting and Escaping?
8:49 PM: Isabelle: not at this moment
8:49 PM: HOST: did you like the video clips?
8:50 PM: Teresa: good night all
8:50 PM: Isabelle: yes i did
8:50 PM: HOST: bye Teresa!
8:50 PM: Teresa has left the room.
8:51 PM: HOST: Isabelle, there was one more thing I wanted to go over with you about the deer inquiry, do you have time?
8:51 PM: Isabelle: yeah sure
8:52 PM: HOST: Folks have been stumped about the question of what controls the activity state of "rutting", in contrast to the action event of "roar"
8:52 PM: HOST: did you find it confusing to distinguish between states and events?
8:53 PM: Isabelle: I am sorry it that in module 1
8:54 PM: HOST: OK. this is a preview for Module 2
8:54 PM: HOST: Remember on the video page, where we have the clips divided into albums: Rutting-mating; rutting-fighting; Ingesting; Care;
8:55 PM: HOST: think of each of those albums as an "activity state"
8:56 PM: Isabelle: i found the information
8:56 PM: HOST: in each of the clips, you see a variety of specific "action events"
8:56 PM: HOST: so "activity states" are controlled by hormones
8:57 PM: Isabelle: ok
8:57 PM: HOST: when we think about what "turns on" and what "turns off" an activity state, we think more in terms of what controls the hormones that make that state possible
8:58 PM: HOST: so the stimulus for "Rutting activity" would be photoperiod
8:58 PM: HOST: The stimulus for "roar action event" would be roar of another male, and the context of females; although sometimes there is no external stimulus, roars are spontaneous
8:58 PM: Isabelle: can you briefly describe what you mean by photoperiod
8:59 PM: HOST: the light dark cycle, like now it is dark for more hours in the day than during the summer
9:00 PM: HOST: before the equinox in October, it was light for more hours than dark
9:00 PM: Isabelle: oh ok
9:00 PM: HOST: have you noticed that it is dark by 6 pm now and it used to be light until 8 pm
9:01 PM: Isabelle: yeah i have
9:01 PM: HOST: pretty cool how that affects our biology, and our behavior!
9:01 PM: Isabelle: yeah
9:01 PM: HOST: anything else before we sign off tonight?
9:02 PM: Isabelle: for some reason by this time i feel sleepy and its only 6 oclock
9:02 PM: Isabelle: yeah one question
9:02 PM: HOST: OK
9:02 PM: Isabelle: i send you an e-mail about the final exam
9:02 PM: HOST: yes, I replied that we can schedule a make-up for you in my lab
9:03 PM: Isabelle: oh ok I have not check my e-mail since 5 o clock.
9:03 PM: Isabelle: ok thank you
9:03 PM: HOST: I understand!
9:04 PM: Isabelle: ok thank you
9:04 PM: HOST: Have a good evening, and if I don't see you next week, a happy T-Day!
9:05 PM: Isabelle: you too. Goodnight