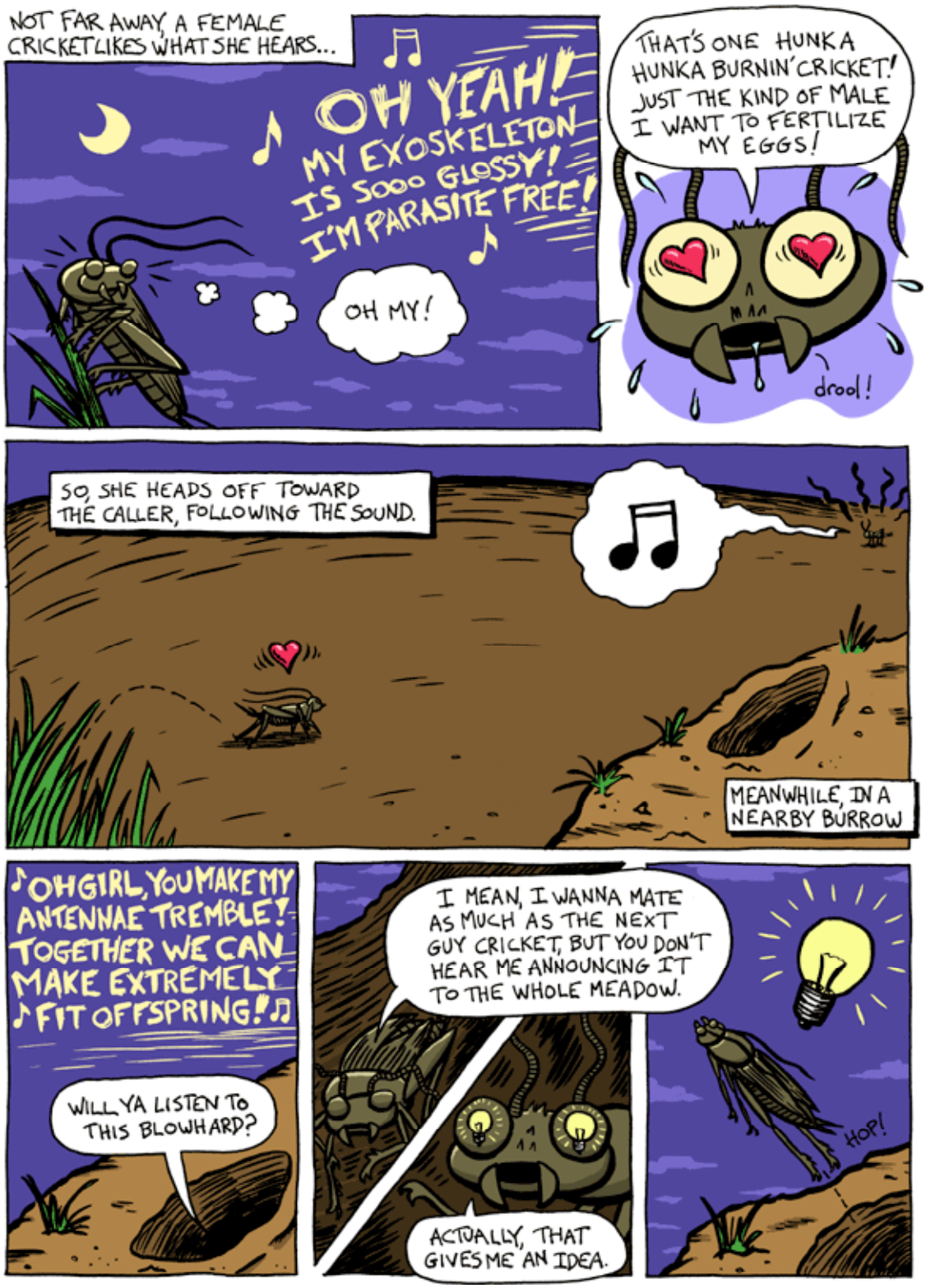
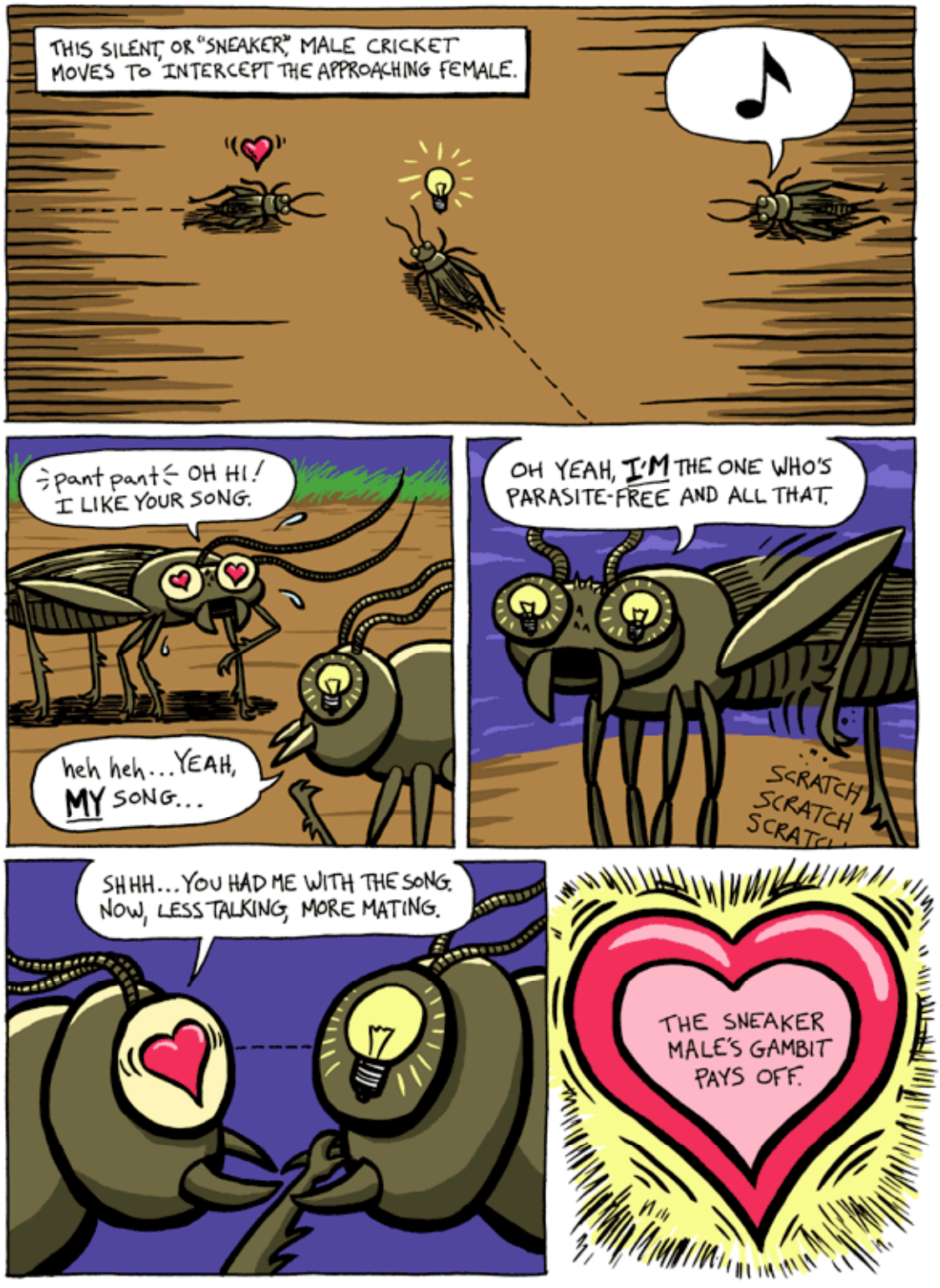
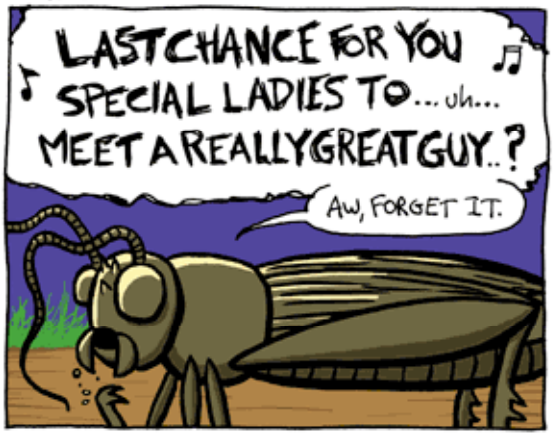

The ROYAL SOCIETY of COMICS presents
Survival of the SNEAKIEST
AH... THE MOON, STARS, A GENTLE BREEZE, CHIRPING CRICKETS... LOVE IS IN THE AIR, WANDA. IT'S A PERFECT NIGHT FOR...
...LESSONS IN THE MATING HABITS OF CRICKETS, AND NATURAL SELECTION!
ARGH... I'LL GO WAIT IN THE CAR.
NATURAL SELECTION: WE'VE ALL HEARD IT EXPLAINED AS "SURVIVAL OF THE FITTEST." THE STRONGEST AND FASTEST WIN. IF YOU'RE TOO WEAK OR SLOW, WELL, TOO BAD, RIGHT?
GRR!
NOT QUITE. LET'S START WITH A SINGLE, MALE CRICKET.
OUR GUY IS A BIG, HEALTHY SPECIMEN— STRONG, CONFIDENT, AND LOOKING FOR LOVE!
WHAT FEMALE WOULDN'T WANT A PIECE OF THIS?
mi mi mi ♪ =cough= a one, and a two, and...
♫ HELLOOo ♪ LADIES!!!


NOT FAR AWAY, A FEMALE CRICKET LIKES WHAT SHE HEARS...
OH YEAH! MY EXOSKELETON IS SOOO GLOSSY! I'M PARASITE FREE!
OH MY!
THAT'S ONE HUNKA HUNKA BURNIN' CRICKET! JUST THE KIND OF MALE I WANT TO FERTILIZE MY EGGS!
drool!
SO, SHE HEADS OFF TOWARD THE CALLER, FOLLOWING THE SOUND.
MEANWHILE, IN A NEARBY BURROW
♪OH GIRL, YOU MAKE MY ANTENNAE TREMBLE! TOGETHER WE CAN MAKE EXTREMELY ♪FIT OFFSPRING!♫
WILL YA LISTEN TO THIS BLOWHARD?
I MEAN, I WANNA MATE AS MUCH AS THE NEXT GUY CRICKET, BUT YOU DON'T HEAR ME ANNOUNCING IT TO THE WHOLE MEADOW.
ACTUALLY, THAT GIVES ME AN IDEA.
HOP!

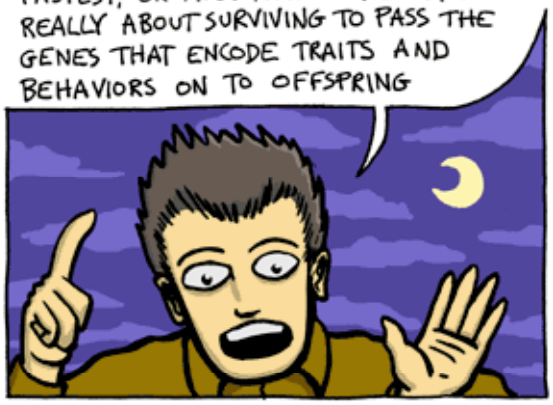

THIS SILENT, OR "SNEAKER," MALE CRICKET MOVES TO INTERCEPT THE APPROACHING FEMALE.
pant pant OH HI! I LIKE YOUR SONG.
heh heh... YEAH, MY SONG...
OH YEAH, I'M THE ONE WHO'S PARASITE-FREE AND ALL THAT.
SCRATCH SCRATCH SCRATCH
SHHH... YOU HAD ME WITH THE SONG. NOW, LESS TALKING, MORE MATING.
THE SNEAKER MALE'S GAMBIT PAYS OFF.

AND OUR ORIGINAL, STRONG, LOUD, CALLING MALE IS OUT OF LUCK.



IN FACT, HIS SONG HAS ATTRACTED SOME UNWANTED ATTENTION.

SEE, "SURVIVAL OF THE FITTEST" ISN'T NECESSARILY ABOUT BEING THE TOUGHEST, FASTEST, OR MOST ATTRACTIVE. IT'S REALLY ABOUT SURVIVING TO PASS THE GENES THAT ENCODE TRAITS AND BEHAVIORS ON TO OFFSPRING



MAYBE OUR SNEAKER MALE'S KIDS WILL INHERIT THE "SNEAKY" GENES, AND IN TURN USE SNEAKY BEHAVIOR LIKE THEIR FATHER.

OF COURSE, TOUGHNESS **CAN** HELP TO INCREASE AN ORGANISM'S CHANCE OF LIVING LONG ENOUGH TO REPRODUCE...

...BUT REPRODUCTION AND THE PASSING ON OF GENES ARE MOST IMPORTANT IN TERMS OF EVOLUTION. AND THERE ARE MANY WAYS THAT AN INDIVIDUAL CAN GET THEIR GENES INTO THE NEXT GENERATION.

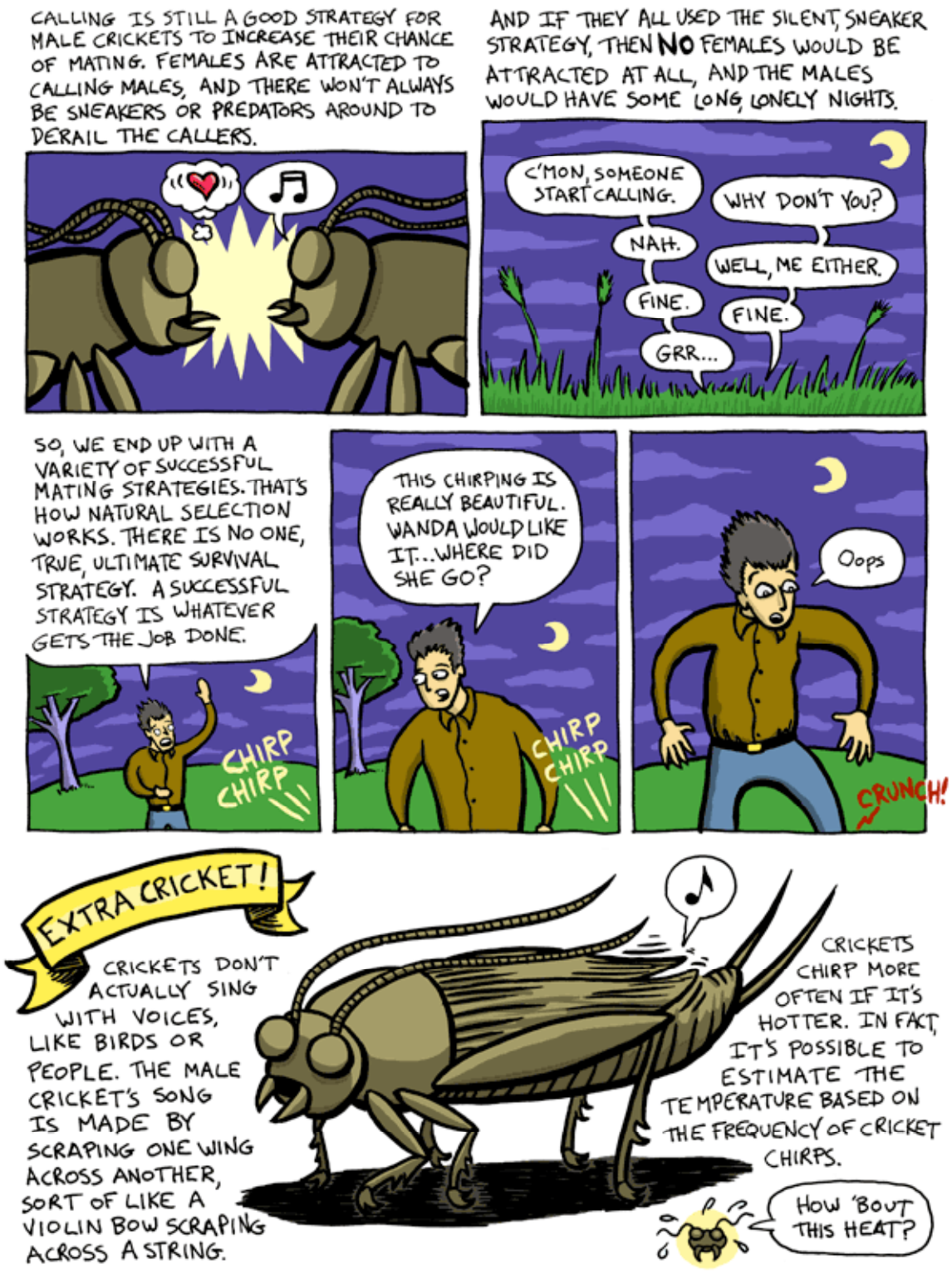


Image courtesy of http://evolution.berkeley.edu/evolibrary/article/0_0_0/sneakermales_01

DO I HAVE YOUR ATTENTION?

NAME_____
SECTION_____DATE_____

WORKSHEET (TRACKSTAR #293502)
Using Adaptation Studies to Bridge Ecology with Evolution

Read the comic about crickets. This article relates the topic of how sex may direct evolution in a particular pathway.
Read and answer these questions:

1.When it comes to crickets, what does fitness mean?

2. Is calling good or bad for a cricket's fitness?

3. Give some examples of selection at work in this cricket story.

4. How does selection favor calling? How does selection favor non calling?

Go to the next website:

You will view two video clips. To get to the first video clip use the Following format:
1-Click Evolution Library icon.
2-Click on the heading "Adaptation and Natural Selection" in the lower left column.
3-Scroll down to heading "Adaptive Compromise" then "Toxic Newts"
4-Read the background information.
5- Double click on the video clip. View the clip.

This is a video clip about co-evolution of a toxic newt and a snake, a story of a prey-predator relationship. See how the newt protects Itself against the snake and how the snake against the newt. What do you think are the limits of adaptation?

Draw a comic sequence to illustrate how both organisms in this story respond to the other organism-tell the story of how one organism's adaptations for survival bounce off the other organism.

Answer this question: In your opinion, what do ou think will be the limits of co-evolution for either organism? Who will win this natural Selection scramble-will it be the newt or the snake? Explain.

Next, scroll up to the video clip, "A Mutation Story." Read the back-ground information.

1-What is the cause of sickle cell anemia in terms of genetics?

2-What is the relationship between sickle cell anemia and malaria?

3- How is the evolution of humans altered by the sickle cell gene?