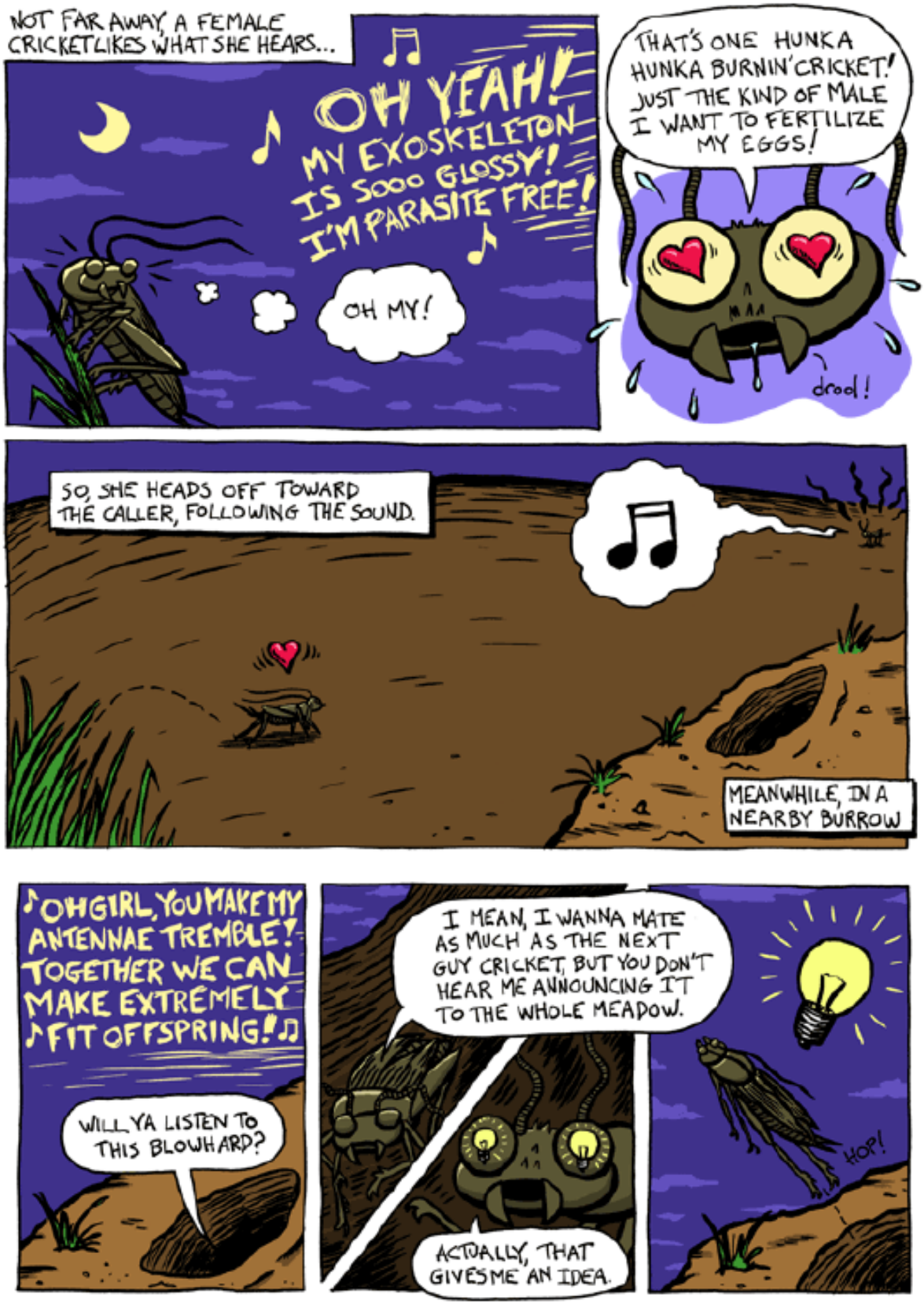
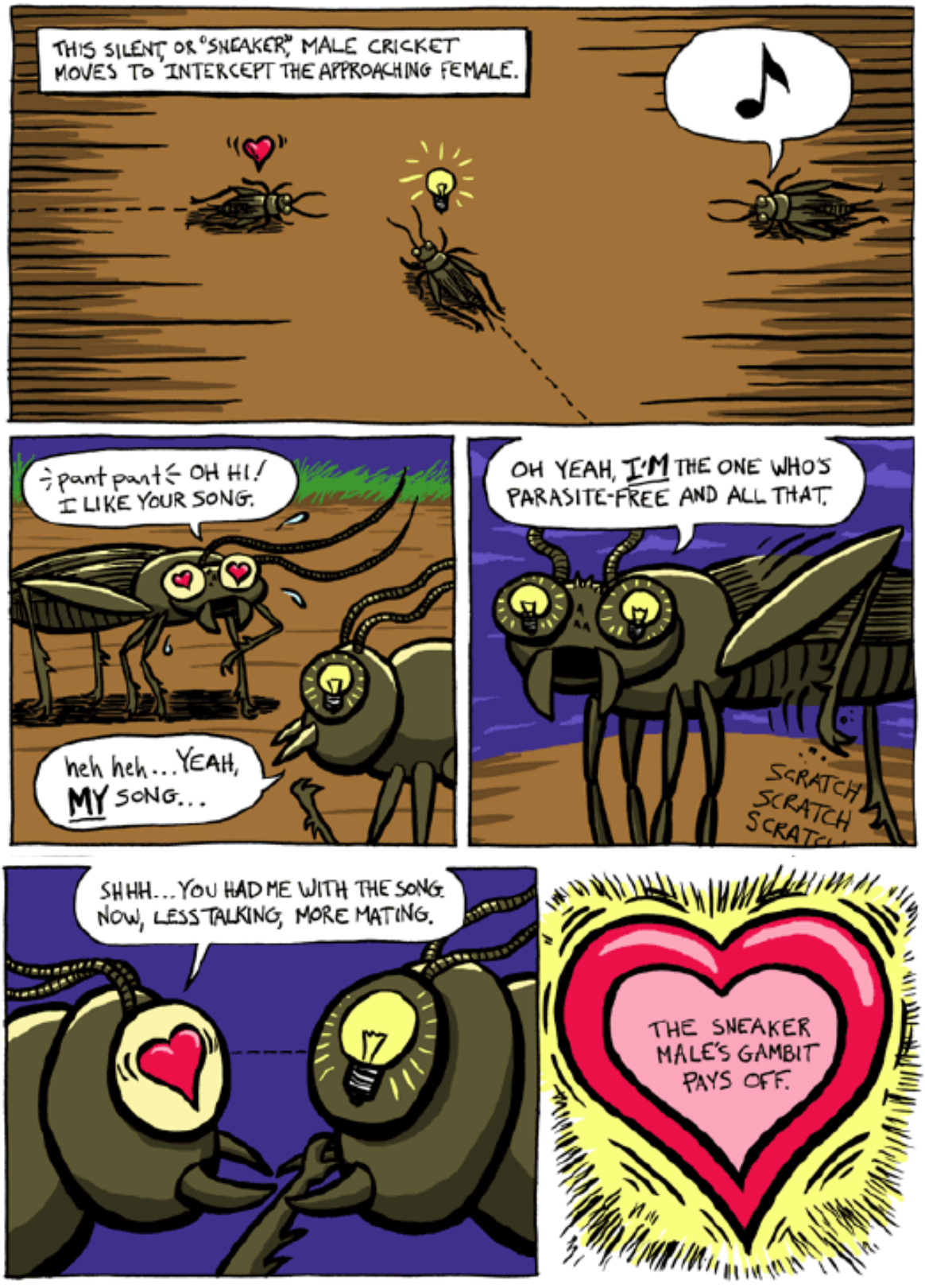
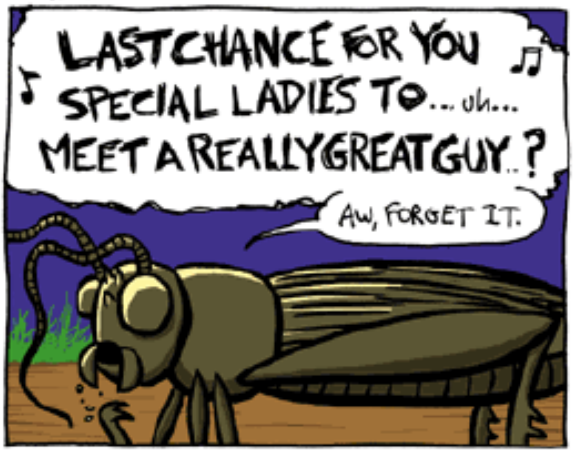
Survival of the Sneakiest *by the Understanding Evolution team* at http://evolution.berkeley.edu/evolibrary/article/0_0_0/sneakermales_01

"Survival of the fittest" means that the strong succeed, and the weak fail, right? Well, often that's how it's portrayed, but the real story is a bit trickier. Let's take a closer look at what the crickets do...


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!

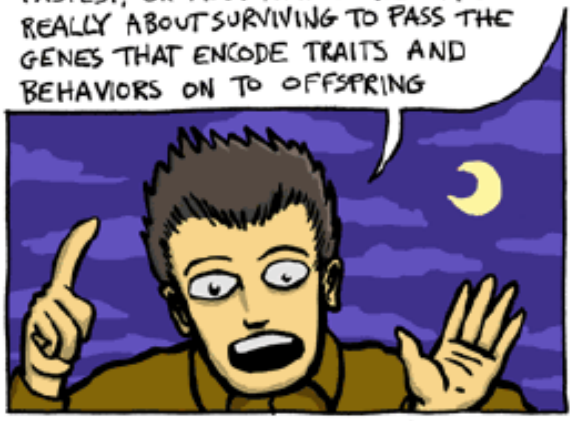

THIS SILENT, OR "SNEAKER," MALE CRICKET MOVES TO INTERCEPT THE APPROACHING FEMALE.
÷pant pant÷ OH HI! I LIKE YOUR SONG.
heh heh... YEAH, MY SONG...
OH YEAH, I'M THE ONE WHO'S PARASITE-FREE AND ALL THAT.
SCRATCH SCRATCH SCRATCH
SHHH... YOU HAD ME WITH THE SONG. NOW, LESS TALKING, MORE MATING.
THE SNEAKER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

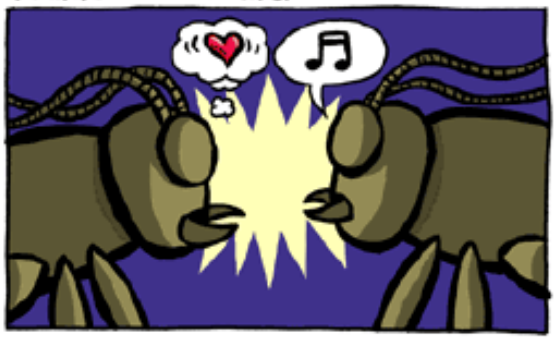


MAYBE OUR SNEAKER MALE'S KIDS WILL INHERIT THE "SNEAKY" GENES, AND IN TURN USE SNEAKY BEHAVIOR LIKE THEIR FATHER.

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.

CALLING IS STILL A GOOD STRATEGY FOR MALE CRICKETS TO INCREASE THEIR CHANCE OF MATING. FEMALES ARE ATTRACTED TO CALLING MALES, AND THERE WON'T ALWAYS BE SNEAKERS OR PREDATORS AROUND TO DERAIL THE CALLERS.

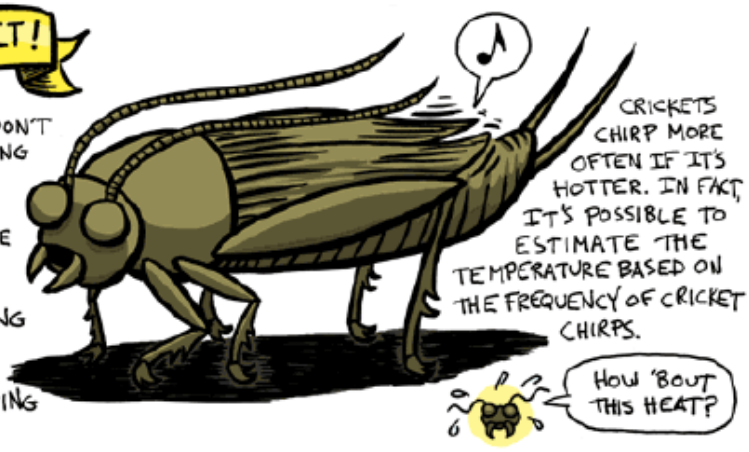


AND IF THEY ALL USED THE SILENT, SNEAKER STRATEGY, THEN **NO** FEMALES WOULD BE ATTRACTED AT ALL, AND THE MALES WOULD HAVE SOME LONG, LONELY NIGHTS.

SO, WE END UP WITH A VARIETY OF SUCCESSFUL MATING STRATEGIES. THAT'S HOW NATURAL SELECTION WORKS. THERE IS NO ONE, TRUE, ULTIMATE SURVIVAL STRATEGY. A SUCCESSFUL STRATEGY IS WHATEVER GETS THE JOB DONE.

EXTRA CRICKET!

CRICKETS DON'T ACTUALLY SING WITH VOICES, LIKE BIRDS OR PEOPLE. THE MALE CRICKET'S SONG IS MADE BY SCRAPING ONE WING ACROSS ANOTHER, SORT OF LIKE A VIOLIN BOW SCRAPING ACROSS A STRING.



CRICKETS CHIRP MORE OFTEN IF IT'S HOTTER. IN FACT, IT'S POSSIBLE TO ESTIMATE THE TEMPERATURE BASED ON THE FREQUENCY OF CRICKET CHIRPS.

Discussion Questions

Write or record your responses

1. An organism's "fitness" for survival isn't necessary about its physical strength. What it is about?

2. Give two examples of natural selection at work in this story

3. How does natural selection favor the "calling" characteristic?

4. How does natural selection favor the "not calling"?