



The University of Texas at Austin  
Environmental Science Institute

*Hot Science - Cool Talk # 116*

# ***A Taste for the Beautiful***

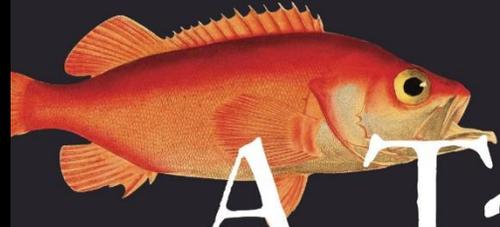
**Dr. Michael J. Ryan**  
**November 30, 2018**

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MICHAEL J. RYAN



A Taste

*for the*

Beautiful

*The* EVOLUTION *of* ATTRACTION





MICHAEL J. RYAN



El gusto

*por la*

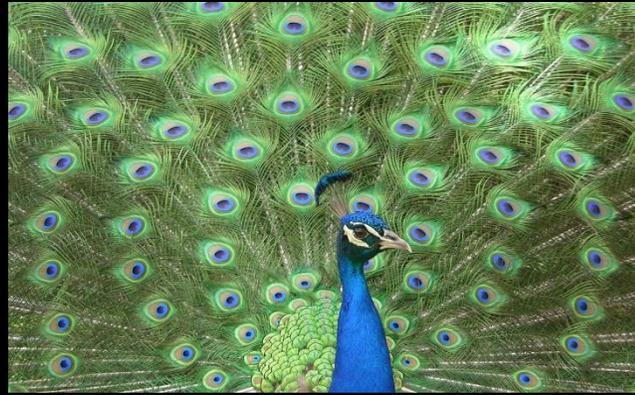
belleza

BIOLOGÍA *de la* ATRACCION



# Outline

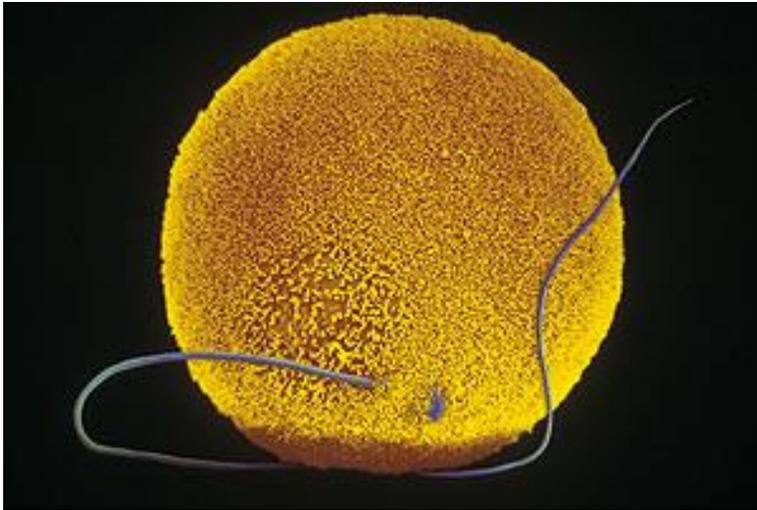
- How can animals evolve traits that cause them to die sooner?
- Why is it that typically males have to compete for the attention of females to mate?
- What is it about these fancy and sometimes deadly male courtship traits that make them so attractive to females?
- In what ways are animals and humans similar in their approach to the mating game?



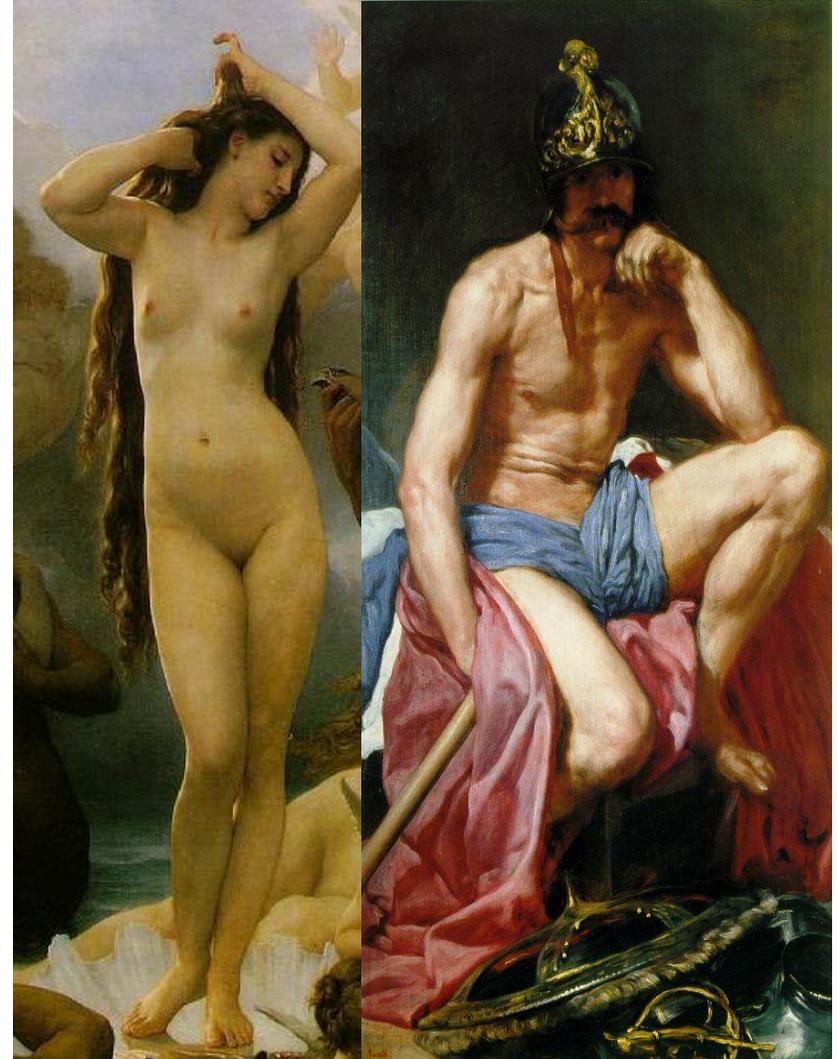
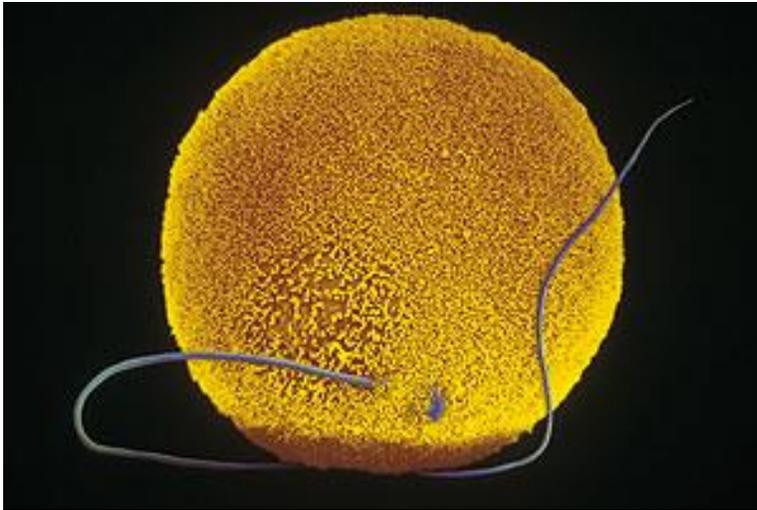
Steve Wilson



*Why does gamete size matter?*



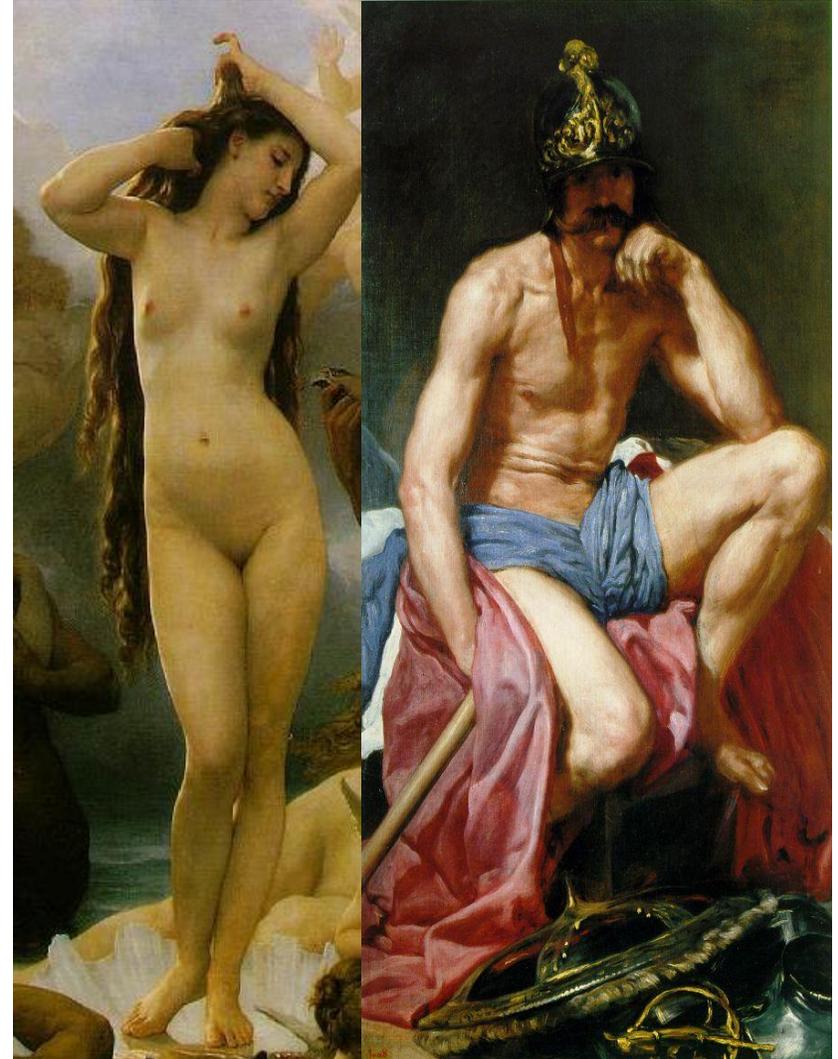
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Venus by Bouguereau & Mars by Velázquez

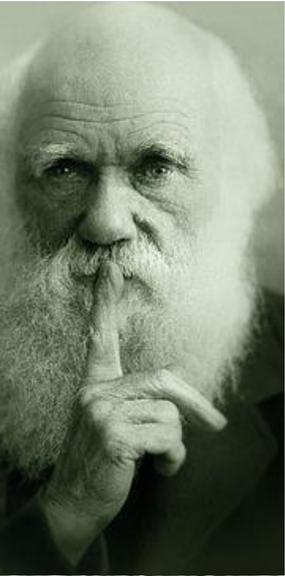
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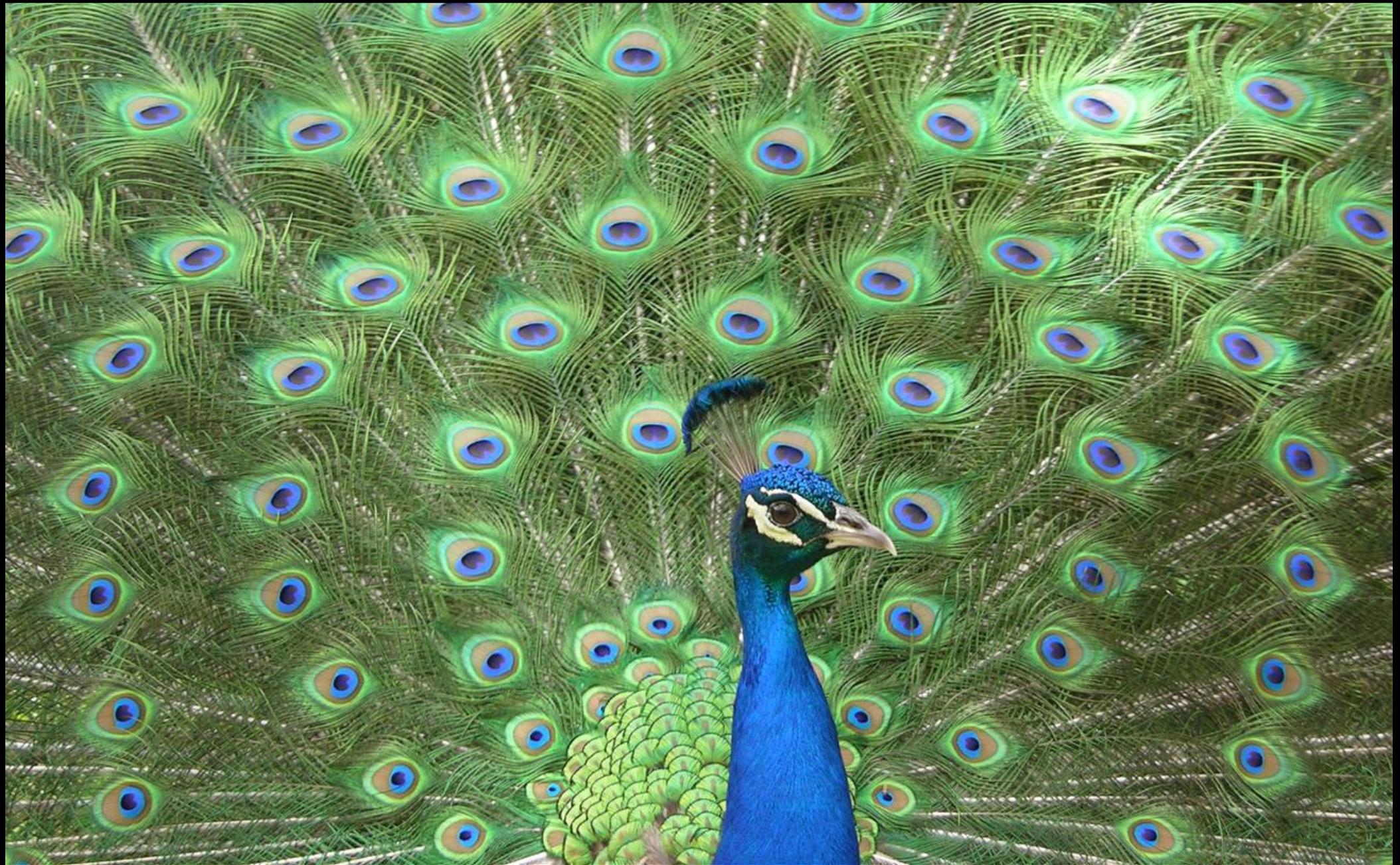
*Typically, males compete for females,  
females choose males.*



Venus by Bouguereau & Mars by Velázquez

*Every time I gaze at a feather in the peacock's tail it makes me sick,  
Charles Darwin, 1860*





*Beauty kills*

*Beauty kills*



*Beauty kills*





(Tuttle & Ryan, 1981, Science)





*Beauty is in the eye of the beholder*

*Beauty is in the brain of the beholder*



Who sees the human face correctly: the  
photographer, the mirror, or the painter?

(Pablo Picasso)

izquotes.com



# Beautiful Sights



BLACK TREE.TV

*Beauty is in the brain of the beholder . . .  
but the brain has other things  
on its mind besides sex.*



*Beauty is in the brain of the beholder . . .  
but the brain has other things  
on its mind besides sex.*



Female prefer males  
with more orange

## Food & Sex



Female and males  
prefer orange fruit



# Food for deception



(Amcoff et al., 2013, Anim. Behav.)

# Supernormal Stimulus





Supermodels as  
Supernormal stimuli?





Supermodels as Supernormal stimuli?

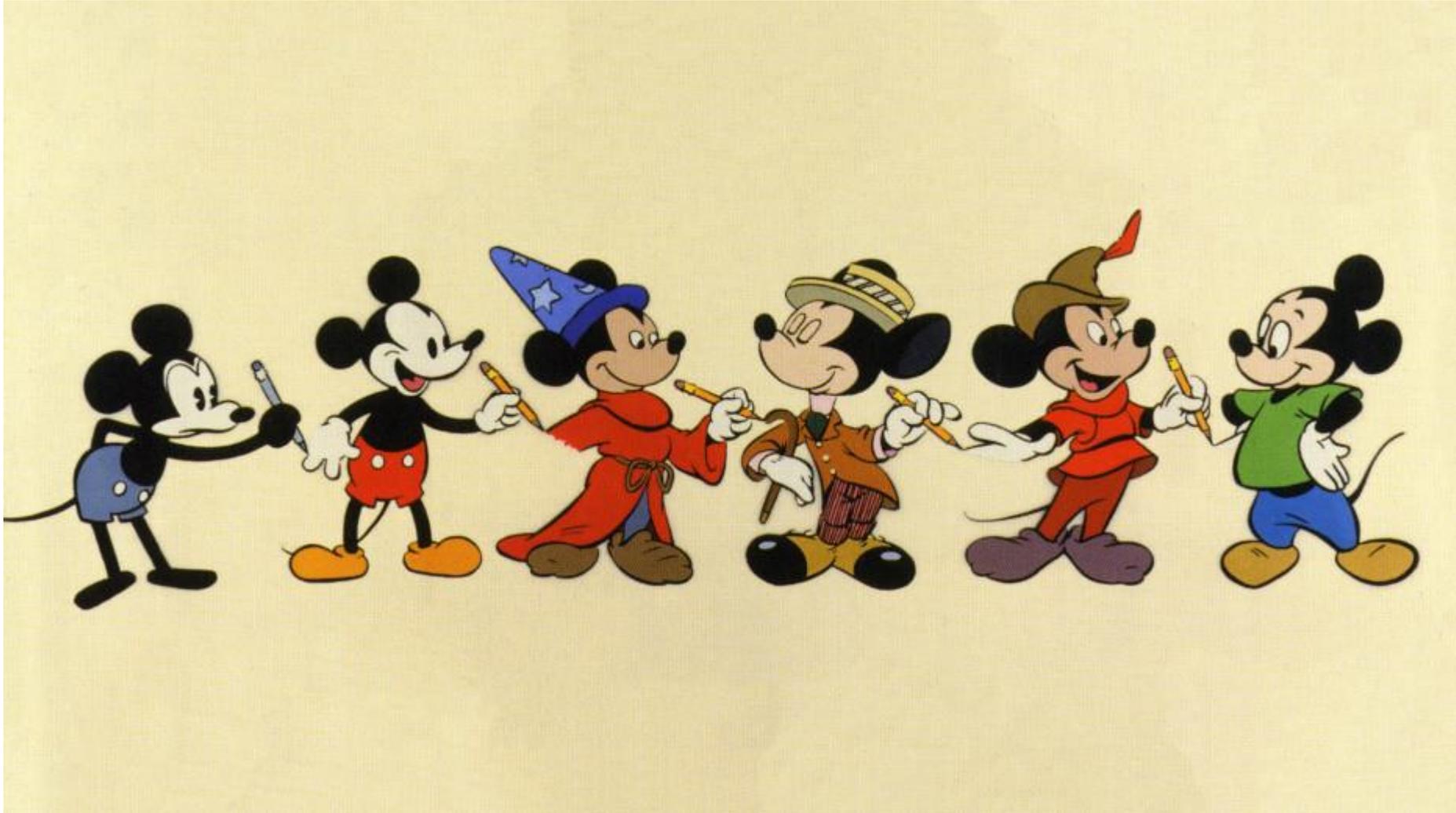
Gisele Bündchen

Height- 5'11"

Weight- 125 lbs

Let's make a supernormal stimulus for our own species

Let's make a supernormal stimulus for our own species



Let's make a supernormal stimulus for our own species

## Is a Barbie Body Possible?

Our **photo-realistic** rendering shows just how bizarre a life-sized Barbie would actually look, and uncovers the **impossible physical proportions** of the doll idolized as perfection by so many.

### Barbie vs. Average

	Barbie	US Average
Head	22"	20"
Neck	9"	15"
Bust	32"	35"
Biceps	7"	13"
Forearms	6"	11"
Wrist	3.5"	6.5"
Waist	16"	35"
Hips	29"	40"
Thigh	16"	25"
Calf	11"	16"
Ankle	6"	9"

(Based on an average height of 5'7")  
(US average ages 18-29)



# Let's make a supernormal stimulus for our own species

- Barbie's neck, wrists, forearms, ankles—and especially her thighs—are like match sticks.

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- Her tiny waist would limit her to half a liver and only a few inches of intestine.
- With her tiny feet, thin ankles, and top-heavy form she would have to walk on all fours.
- *Luckily*, she couldn't reproduce because a baby could not pass through her birth canal.

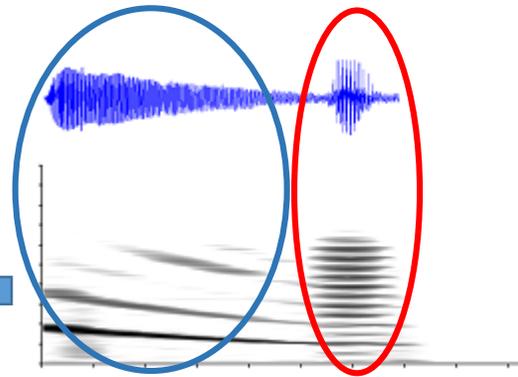
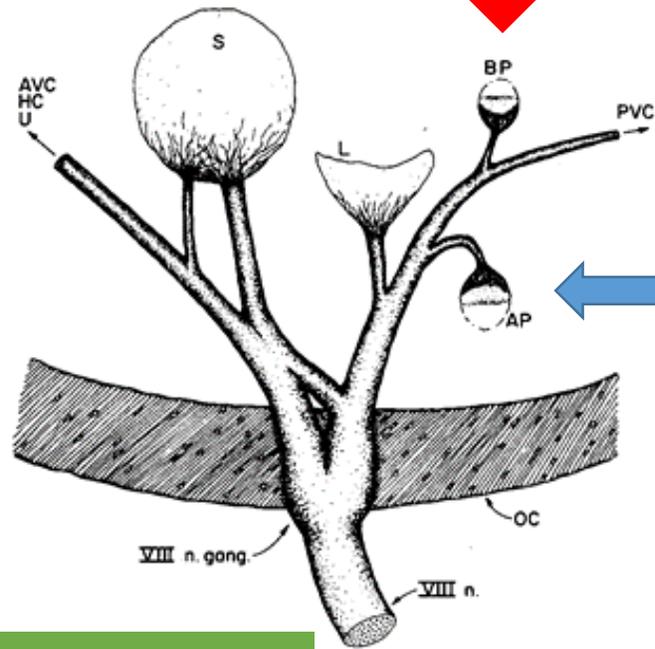
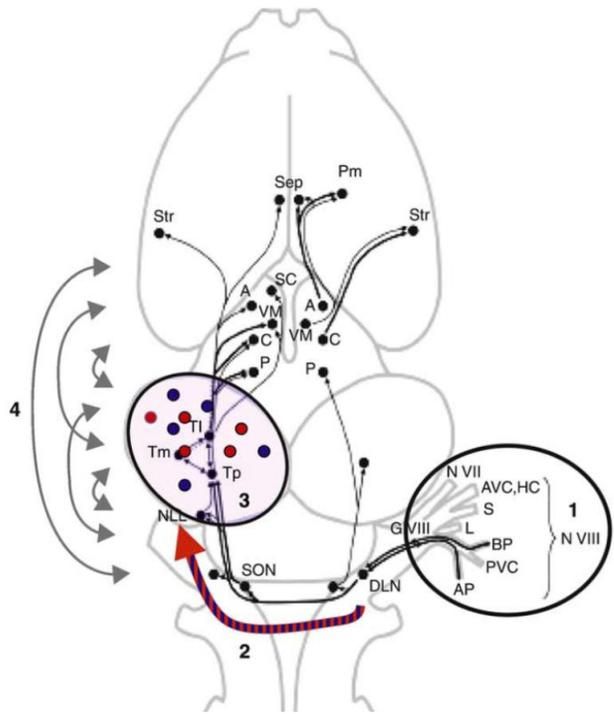


Naomi Wolf  
*The Beauty  
Myth, etc.*

(Wolf, 2016, New York)

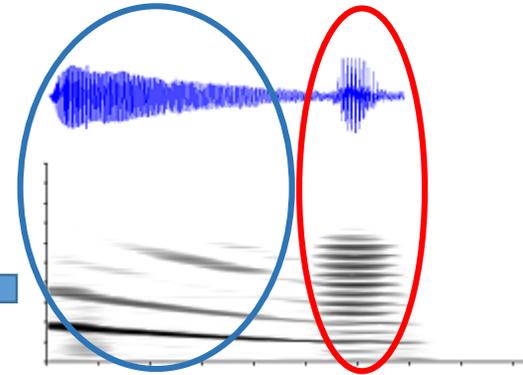
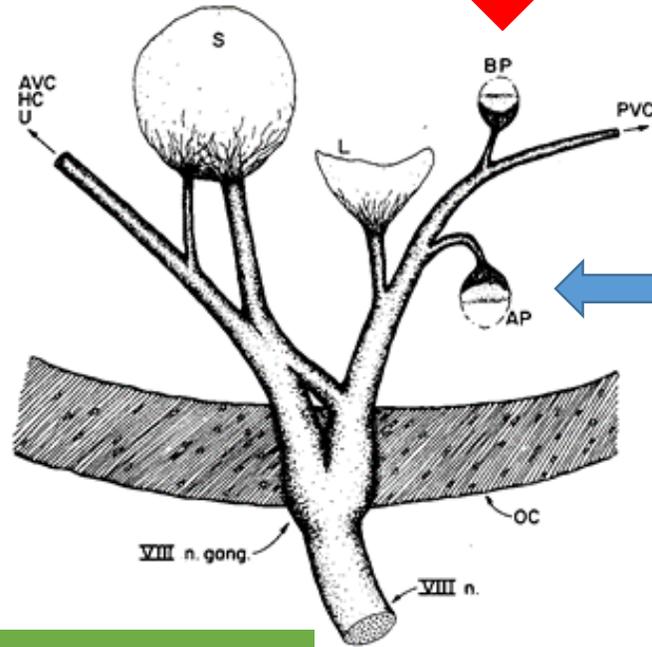
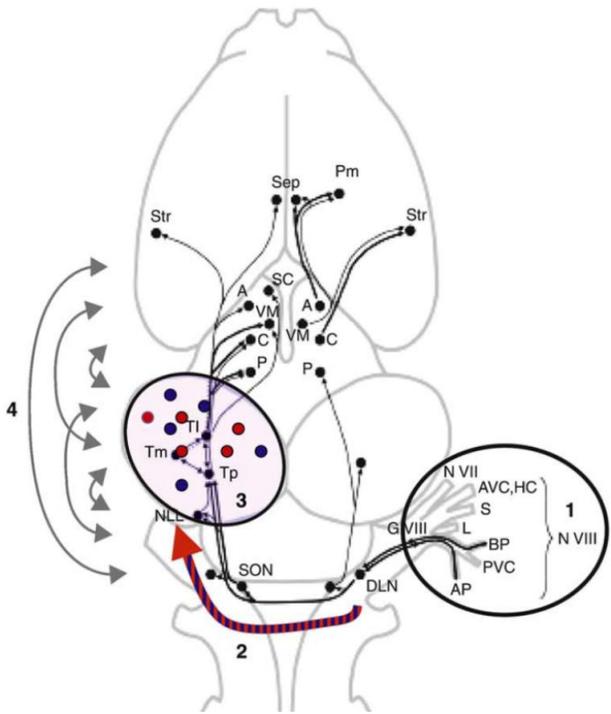
# Beautiful Sounds

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(Ryan et al., 1990, Nature)

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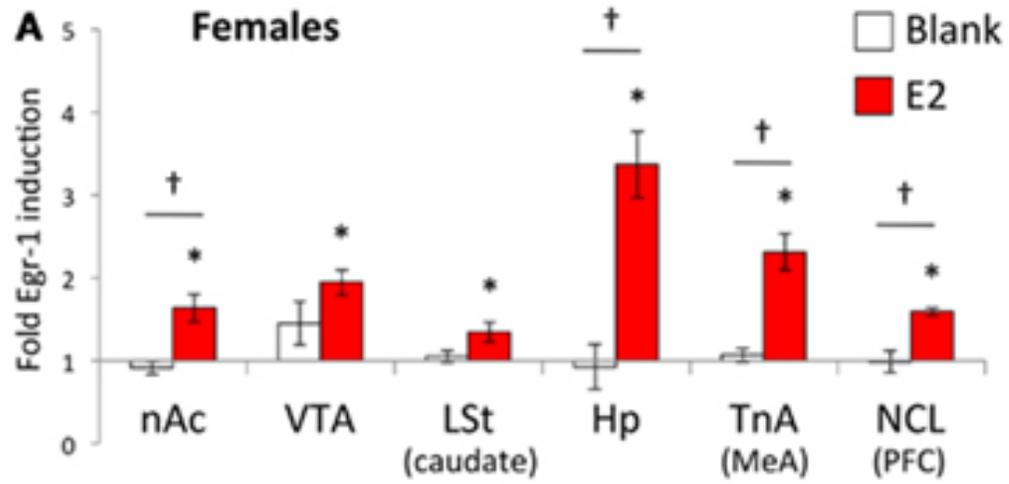
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# *Musician Wren*

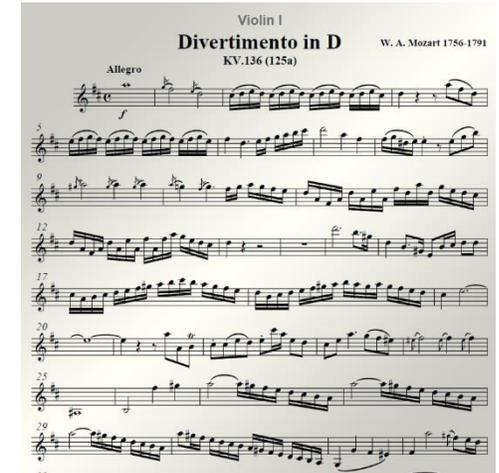


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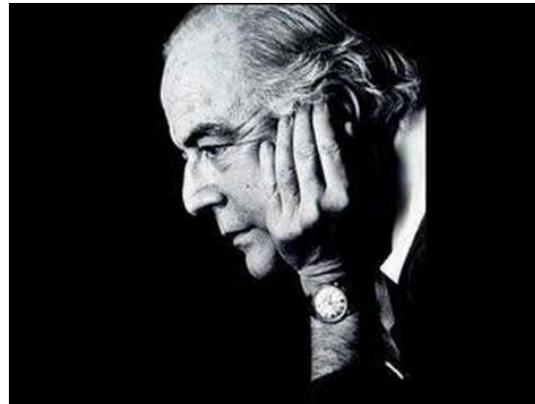


# Music & romantic arousal in men

Mozart's *Eine Kleine Nachtmusik* and *Divertimento No. 136*



Barber's *Adagio pour Cordes*

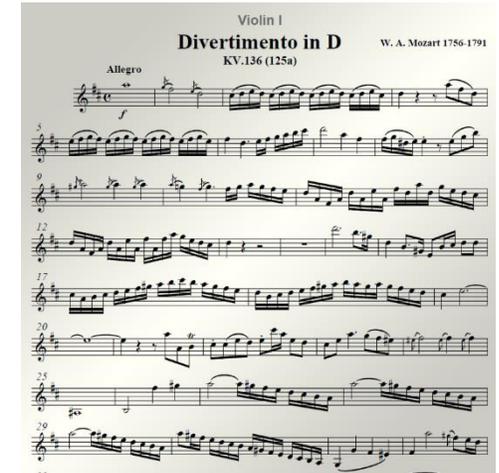


(Mitchell et al., 1998, Arch. Sex. Behav.)

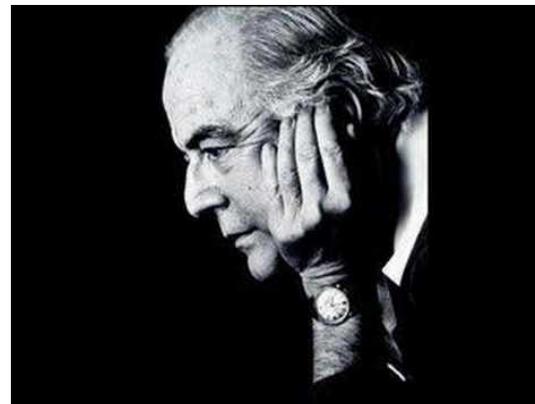
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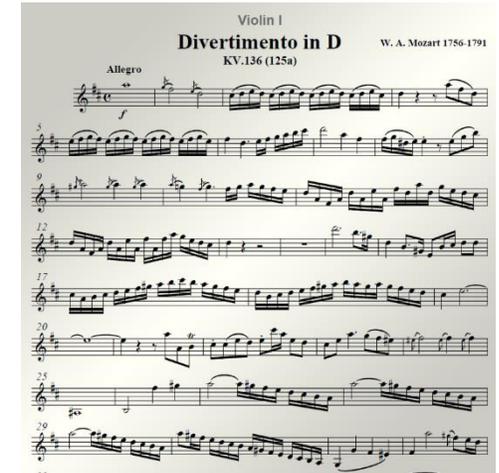
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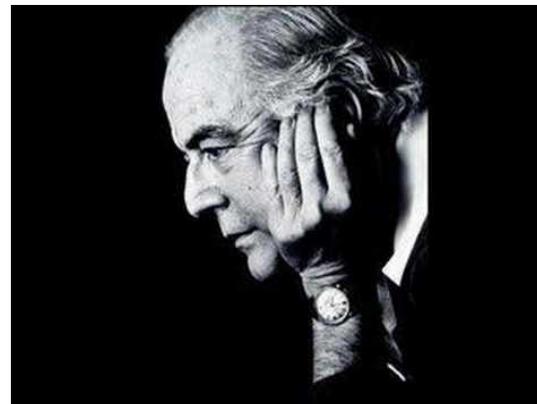
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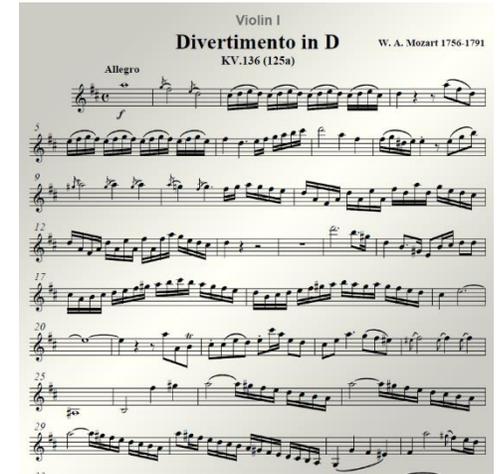


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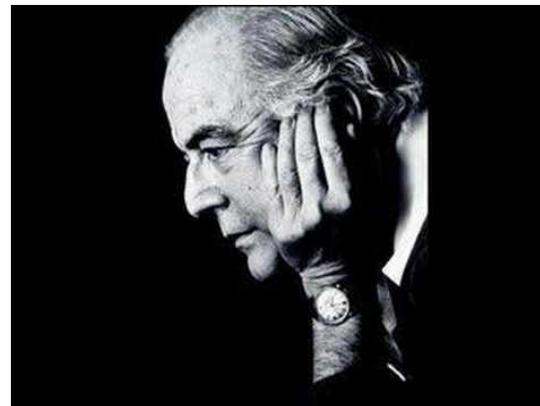
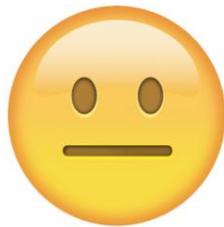


(Mitchell et al., 1998, Arch. Sex. Behav.)

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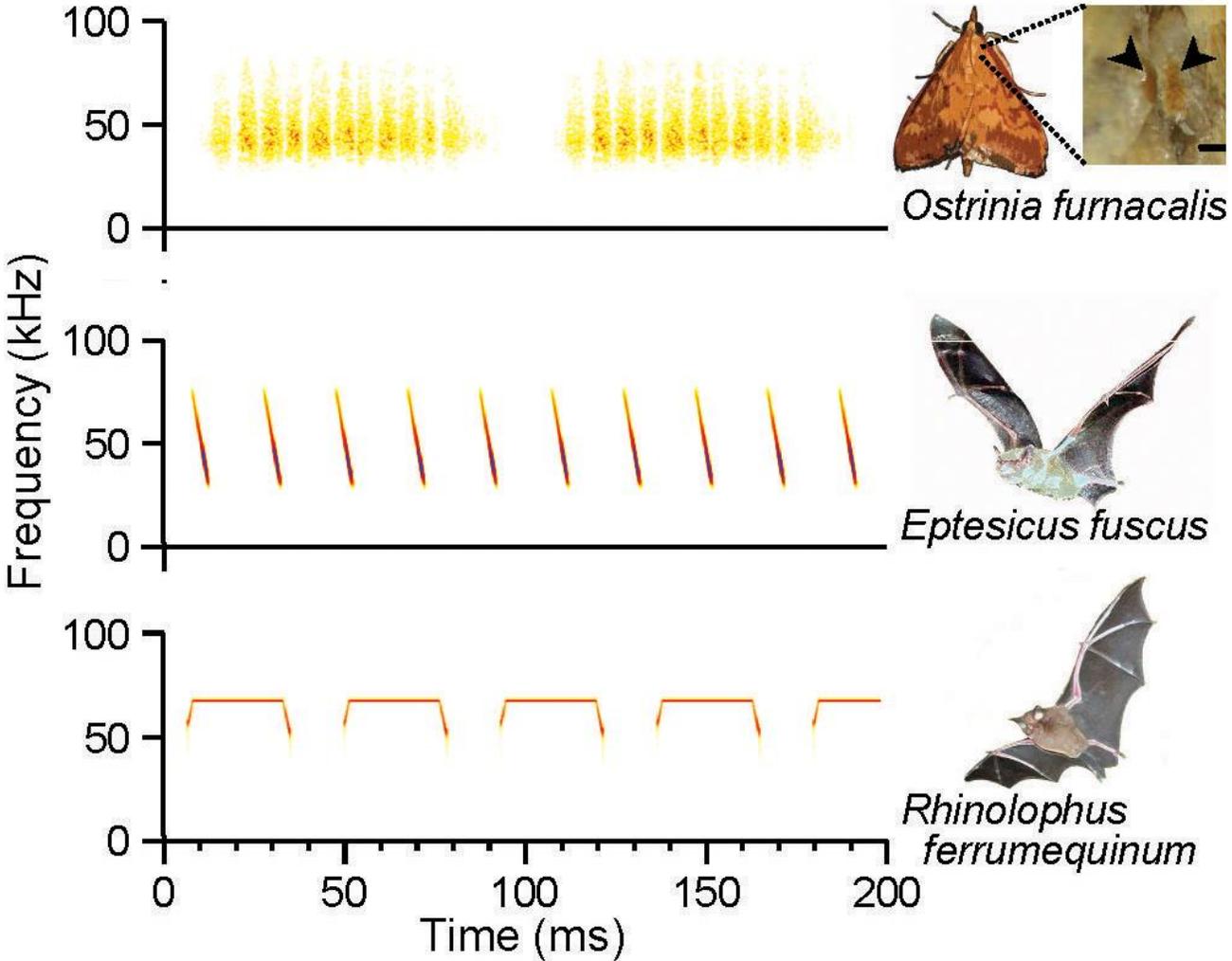


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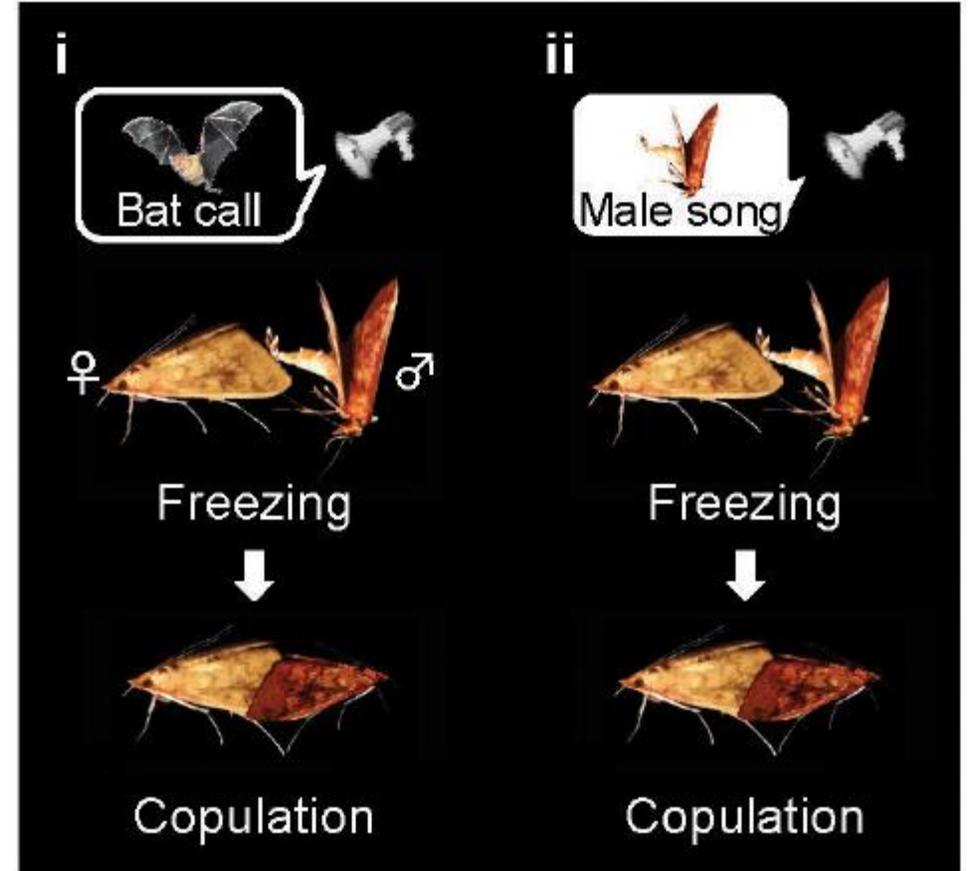
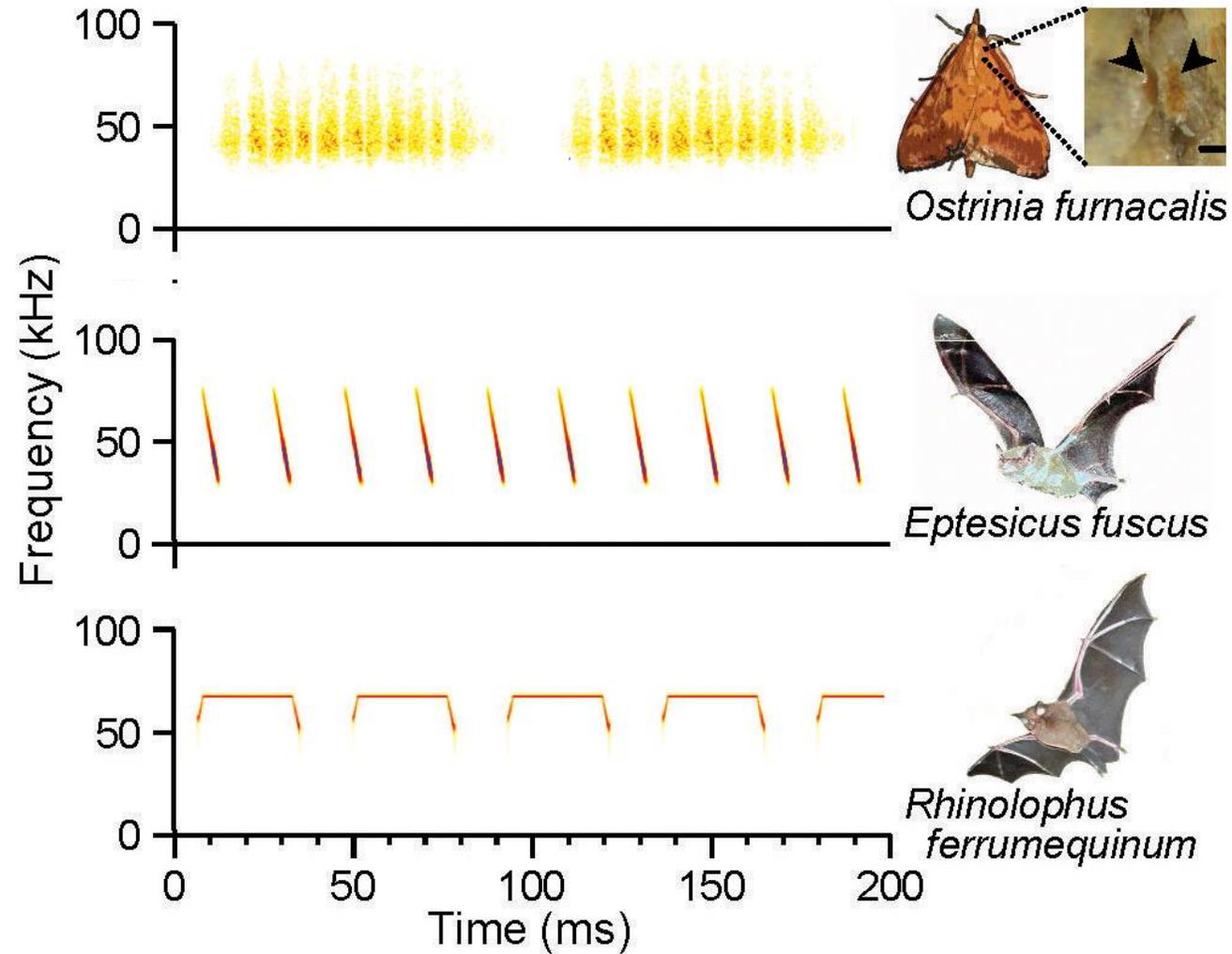
# Deceptive songs



Asian Corn Borer Moth

(Ryo Nakano, 2013, Sci. Rep.)

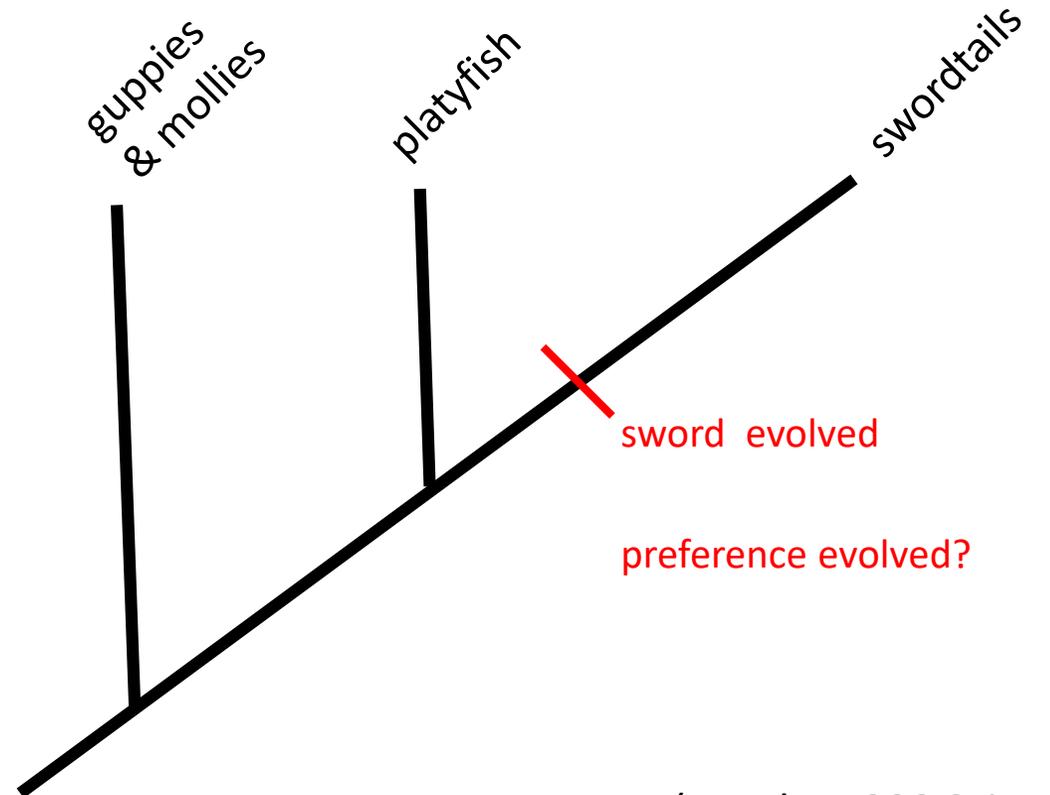
# Deceptive songs



# Lock & Key Hypothesis for Mate Preference

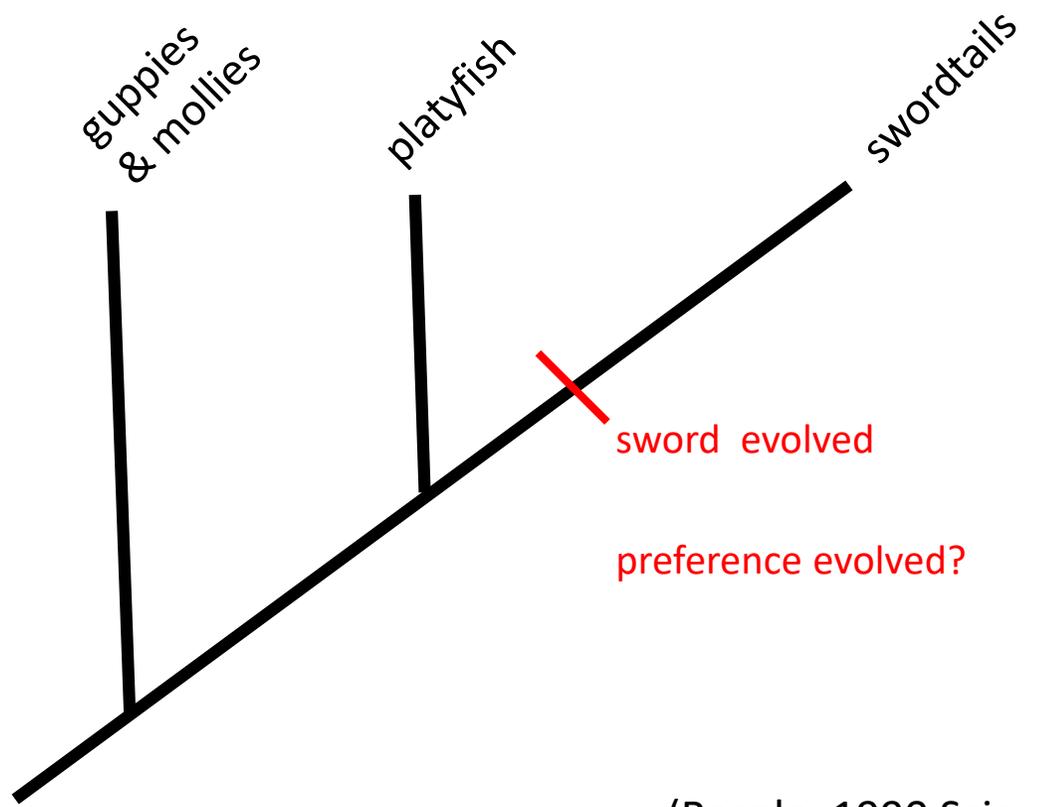
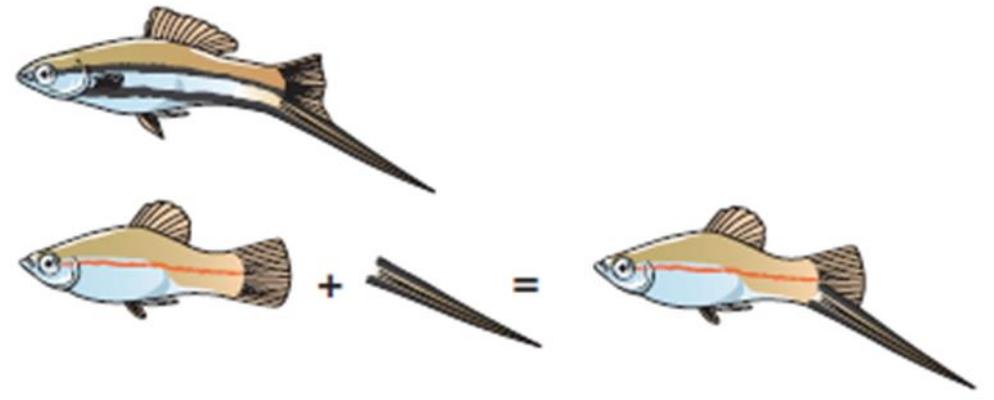


# *Sensory Exploitation*



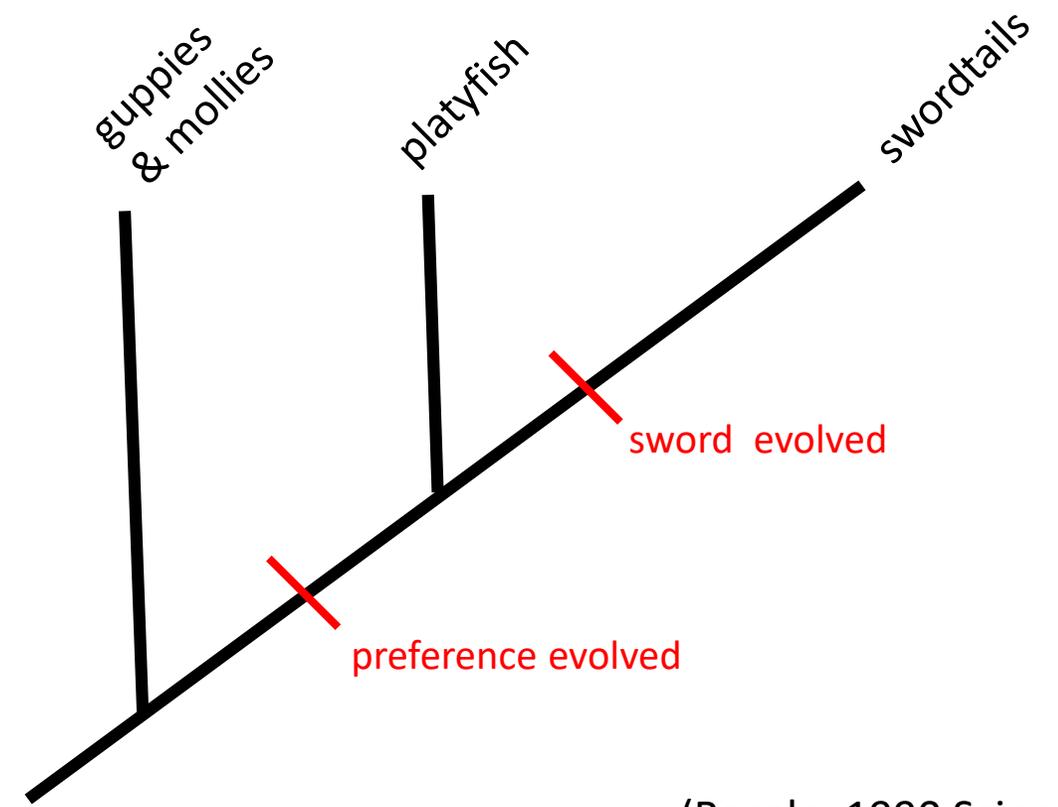
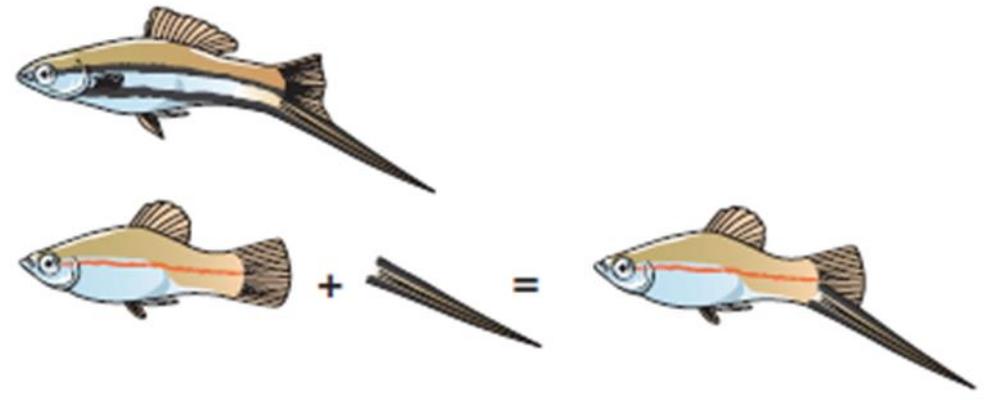
(Basolo, 1990 Science)

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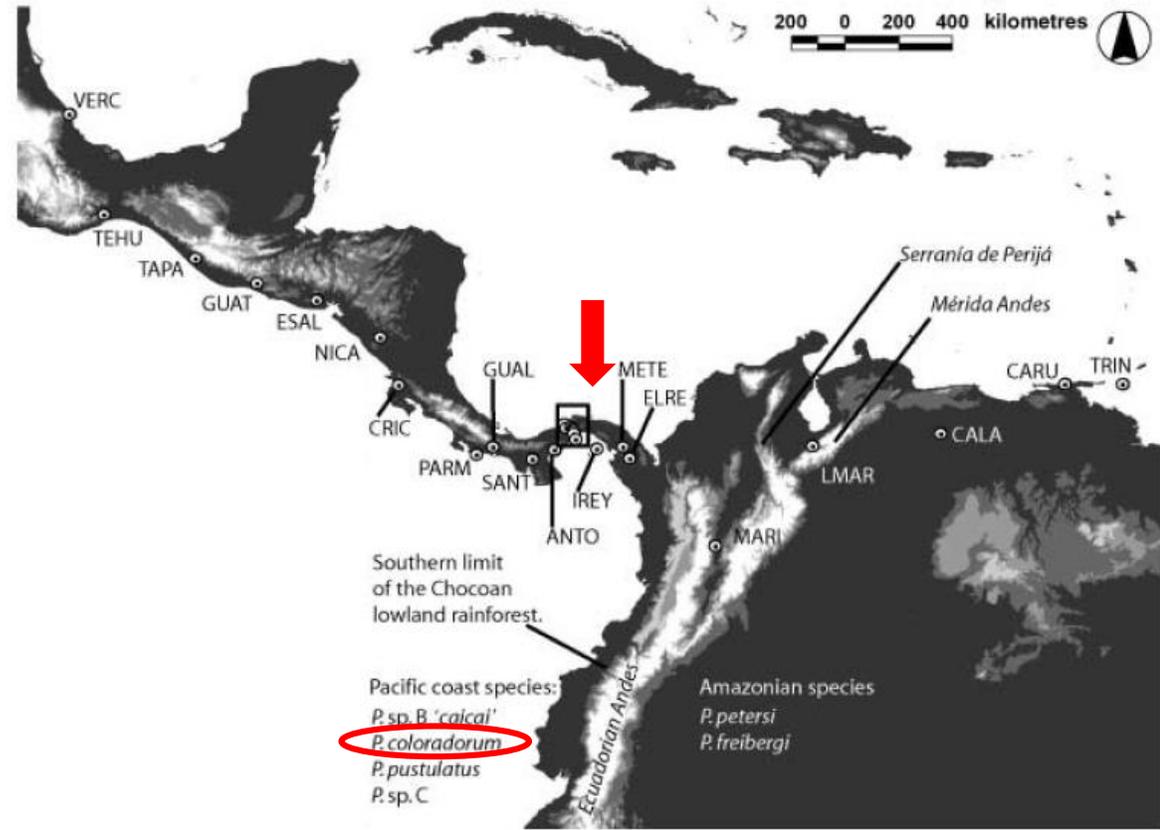
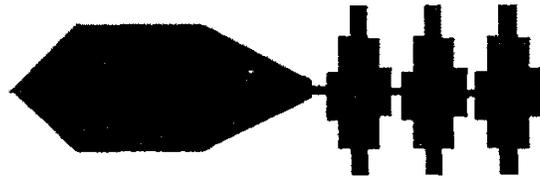


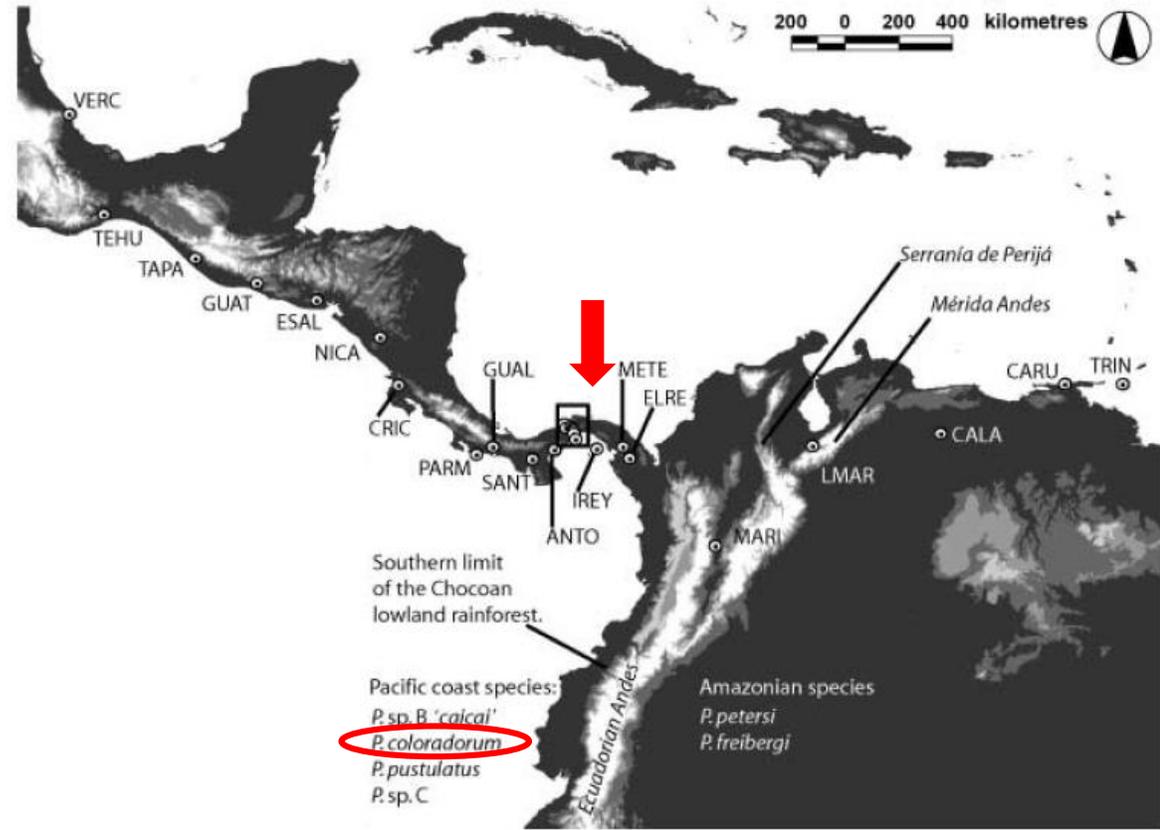
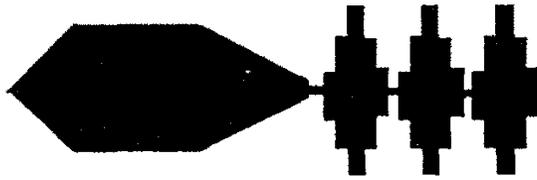
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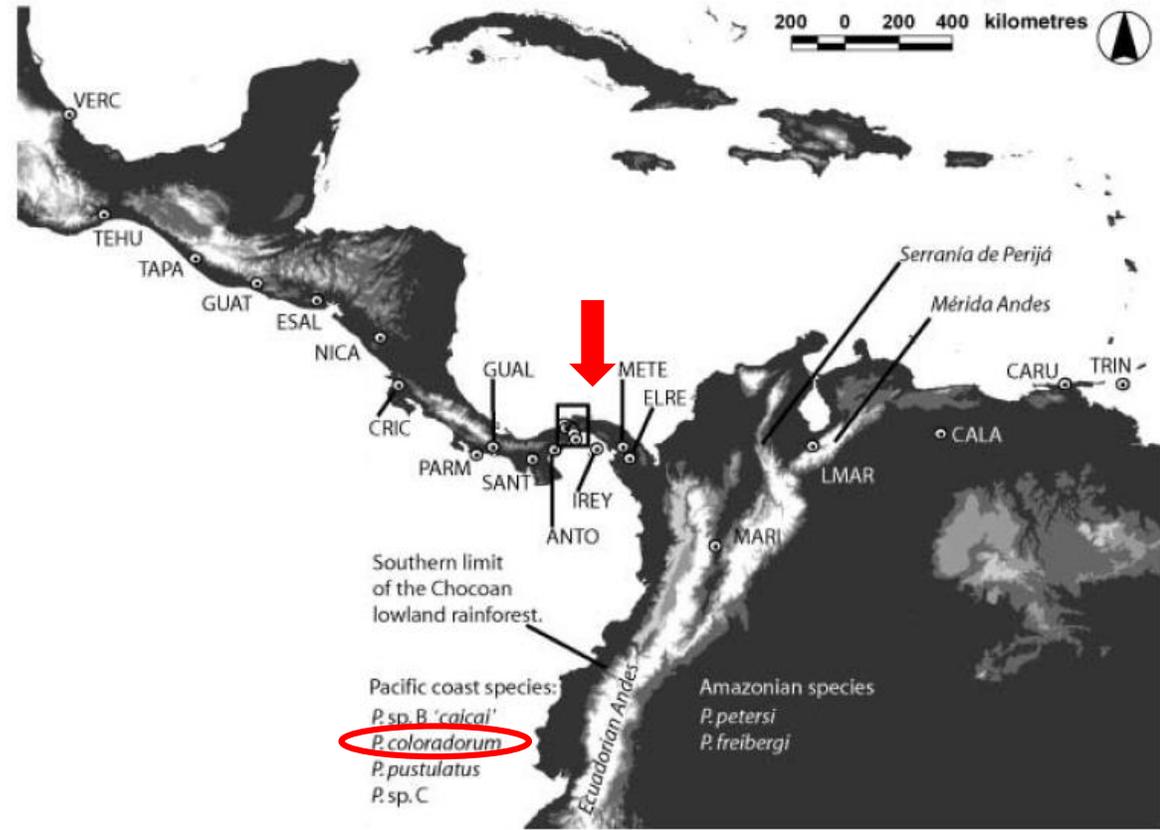
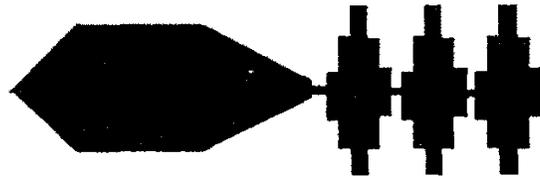
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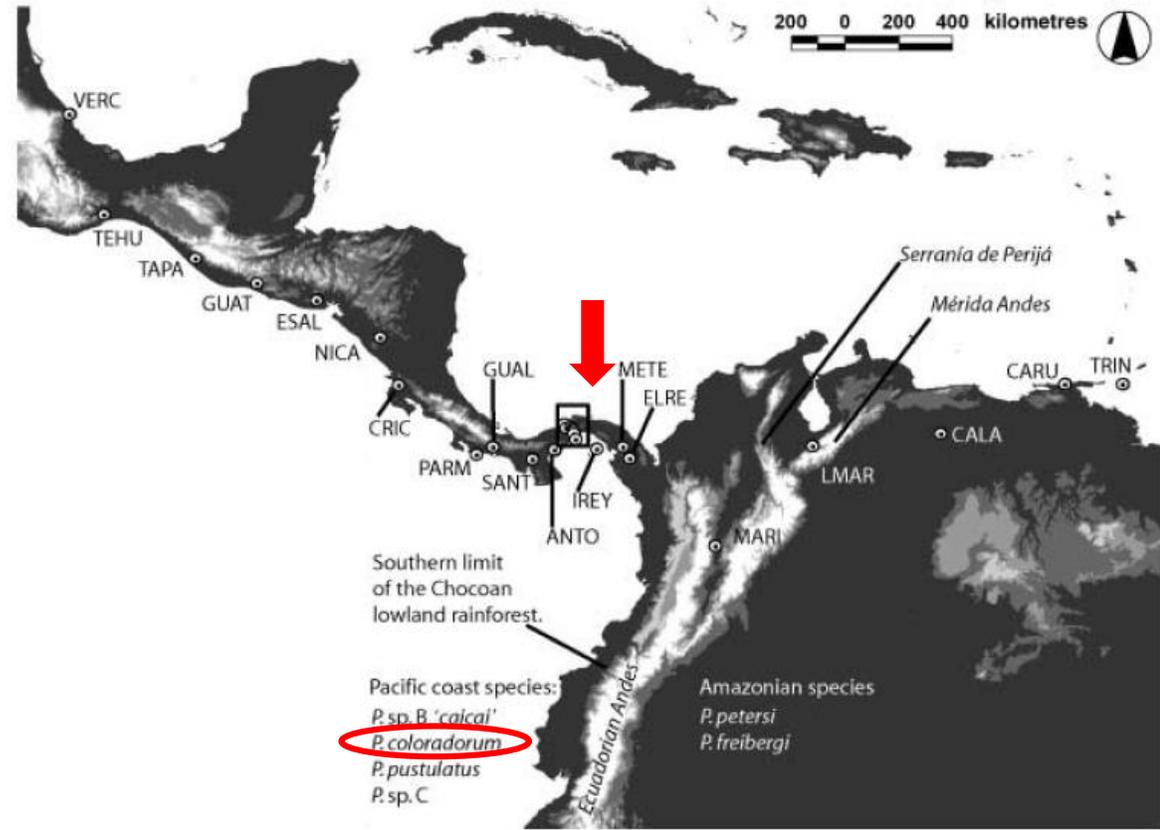
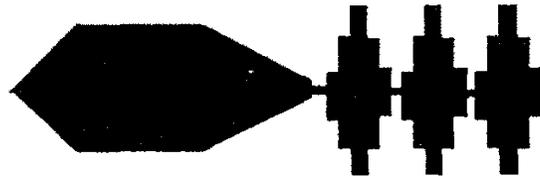
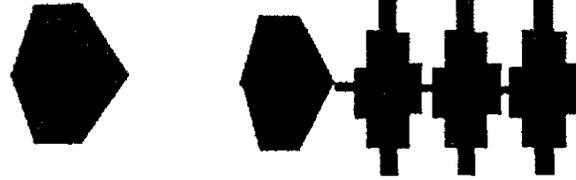


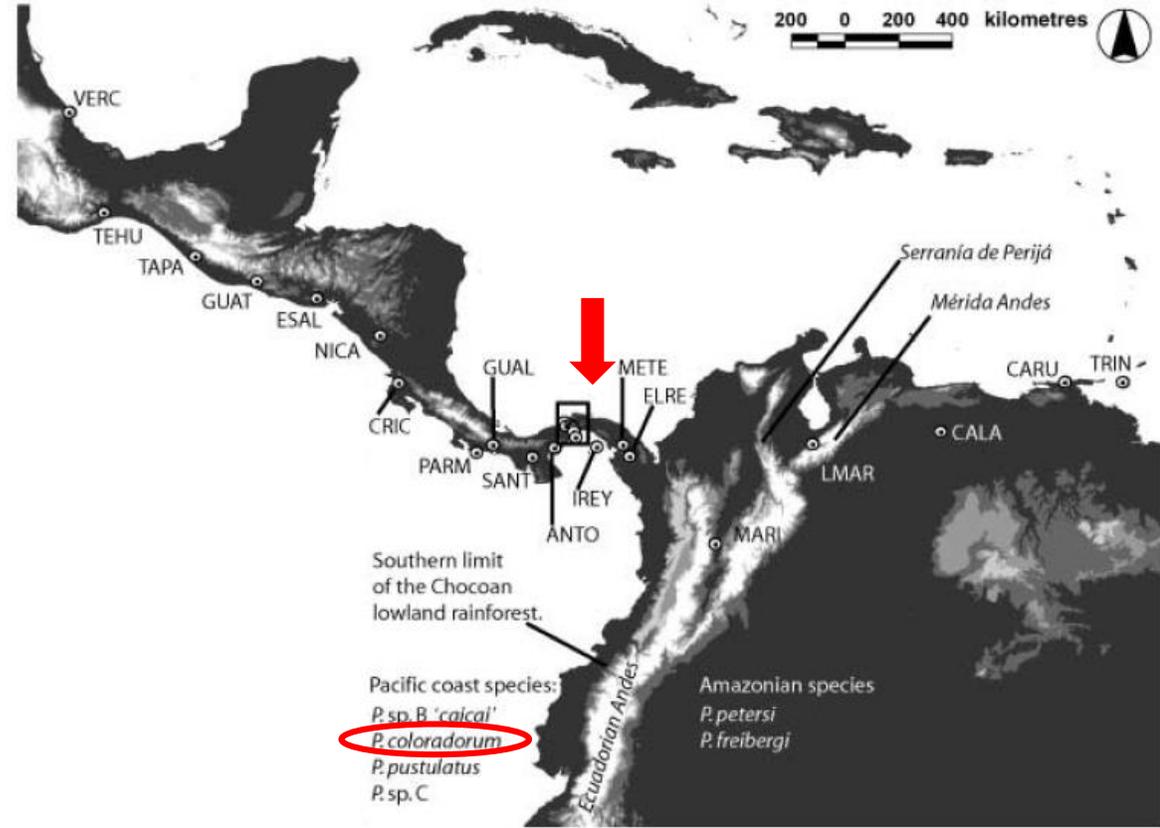
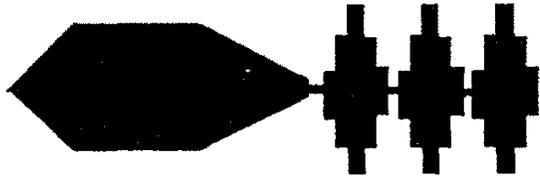
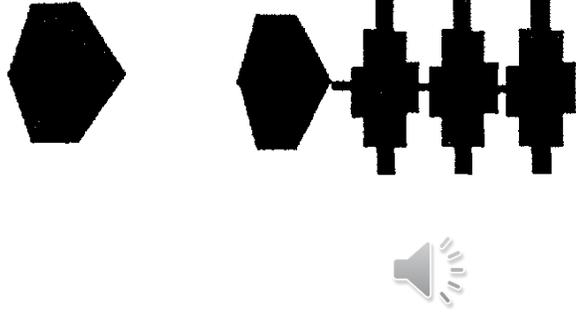
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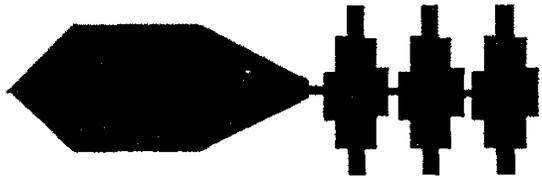
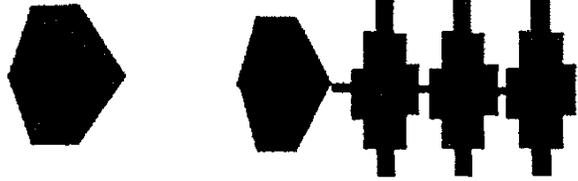




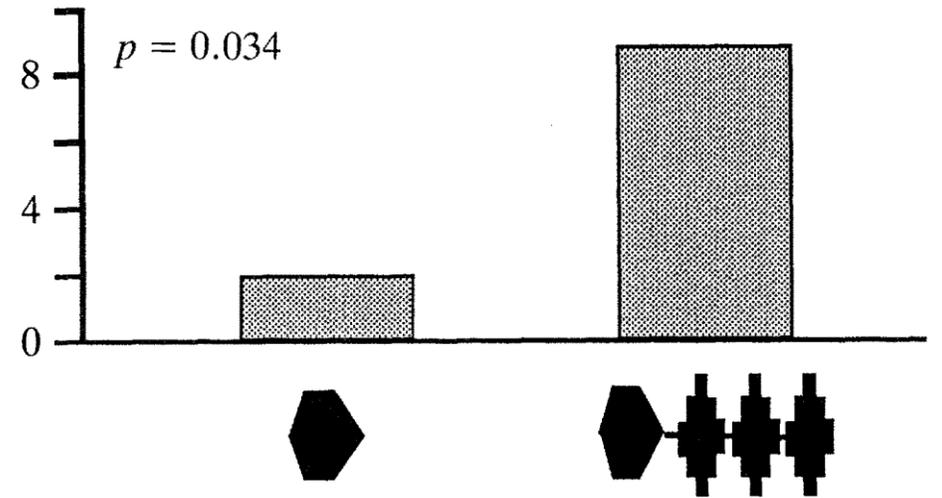








*Physalaemus coloradorum*





# Do the girls really get prettier at closing time?



Do the girls really get prettier at closing time?



© tang90246 · Fotolia.com

#65991469



(Pennebaker et al., 1979, Pers. Soc. Psych. Bull.)

Do the girls really get prettier at closing time?



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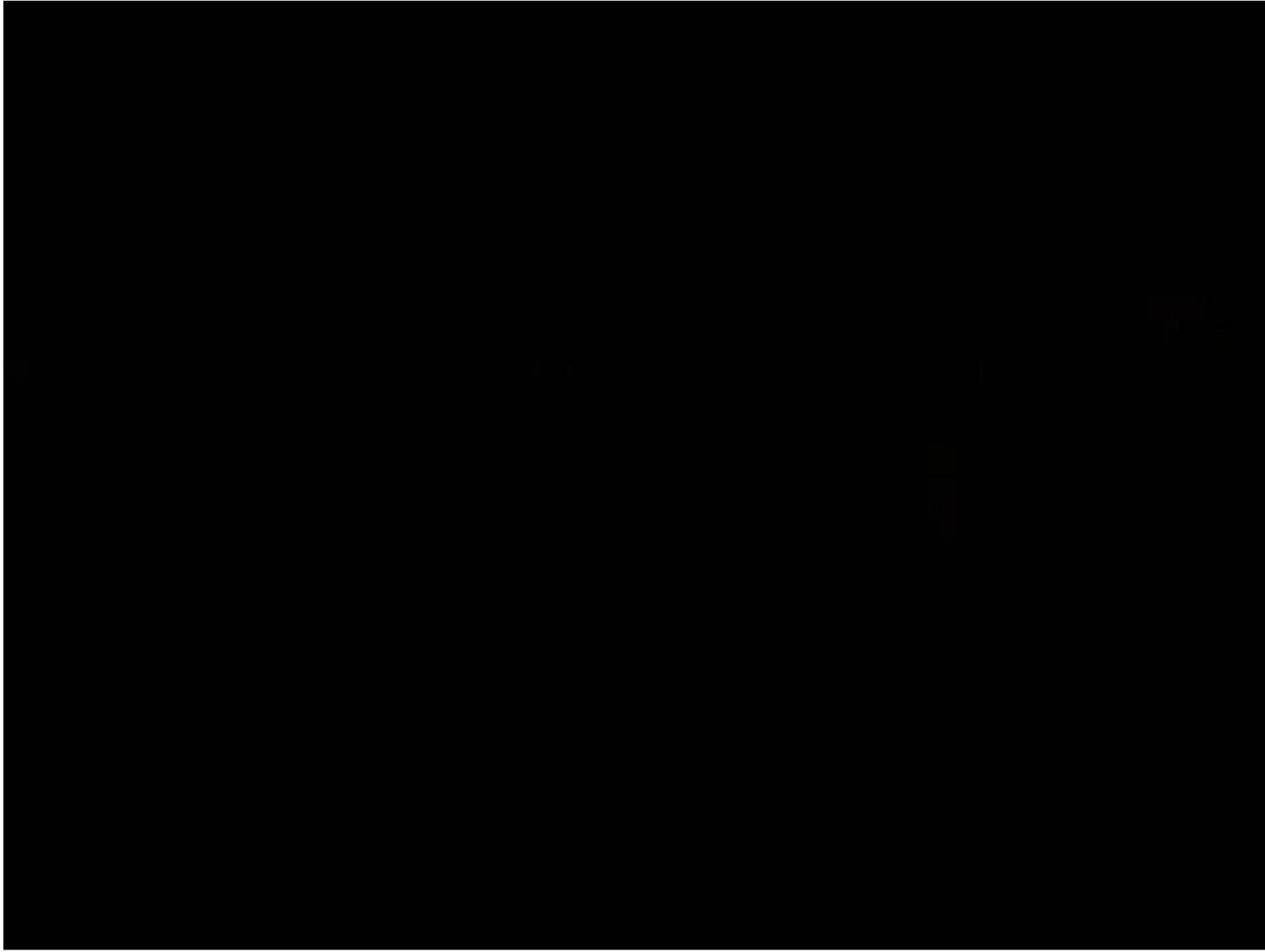


Ryan Taylor



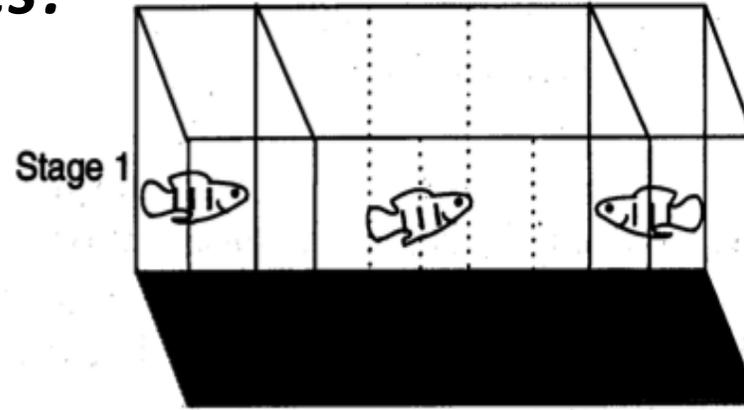
(Lynch, et al., 2005, Anim. Behav.)

# Peer pressure & mate choice copying



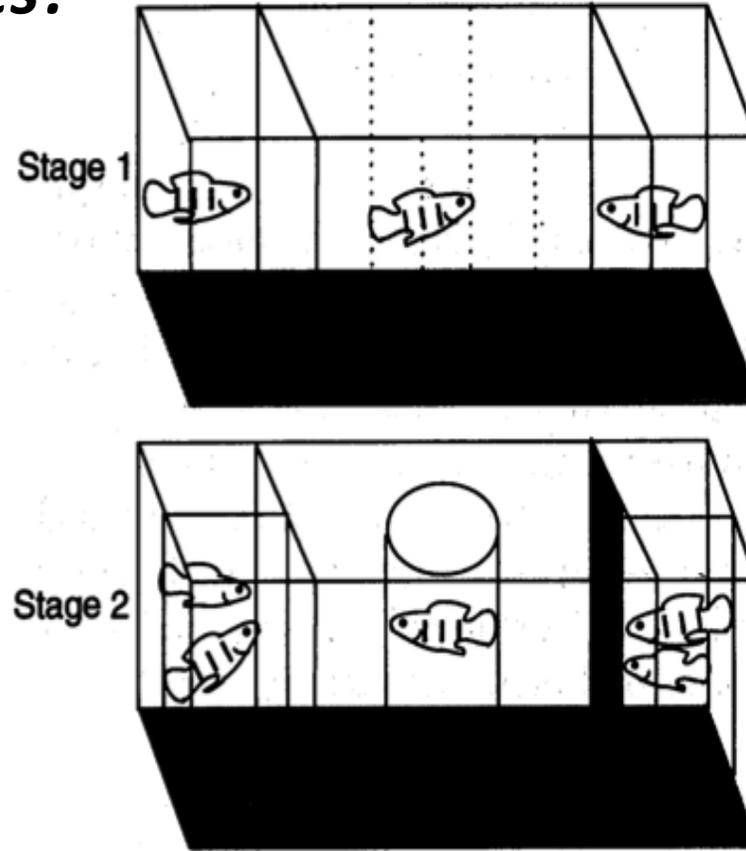
[Reese Witherspoon in \*Legally Blond\*](#)

## *Mate choice copying in mollies?*



A female is in the center and allowed to associate with males courting behind glass barriers. She prefers the larger male.

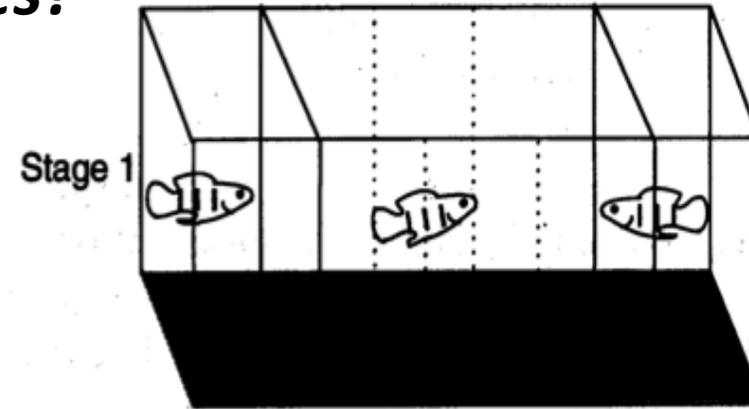
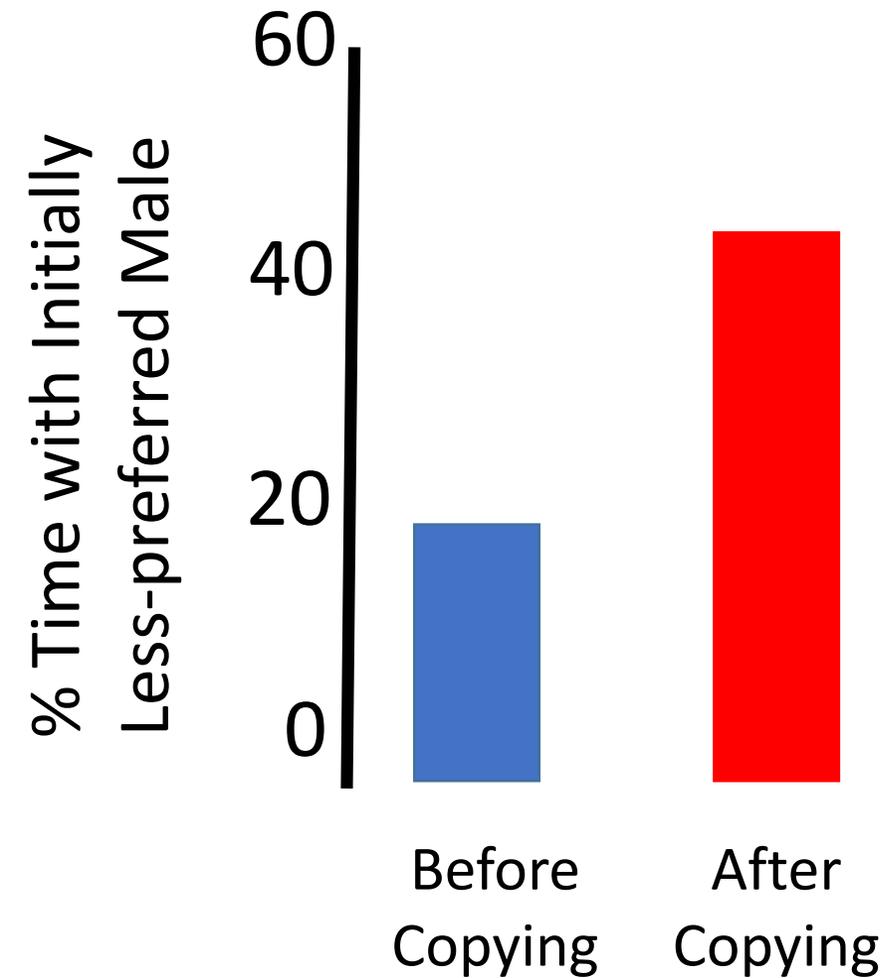
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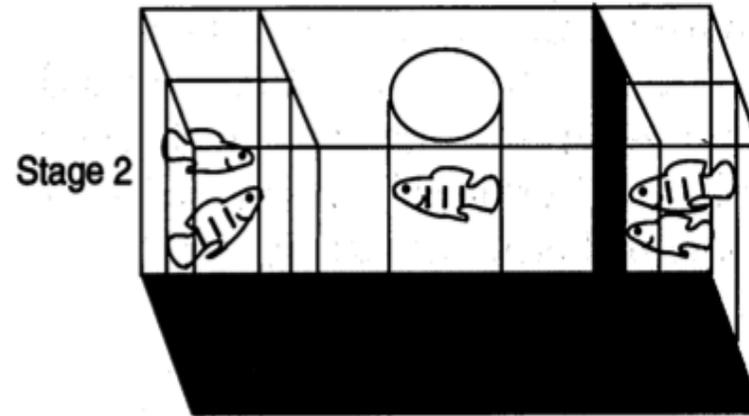
A female is in the center and allowed to associate with males courting behind glass barriers. She prefers the larger male.

The female is constrained to the center. Each male is given a female, but the focal female can only see the less preferred male with a female.

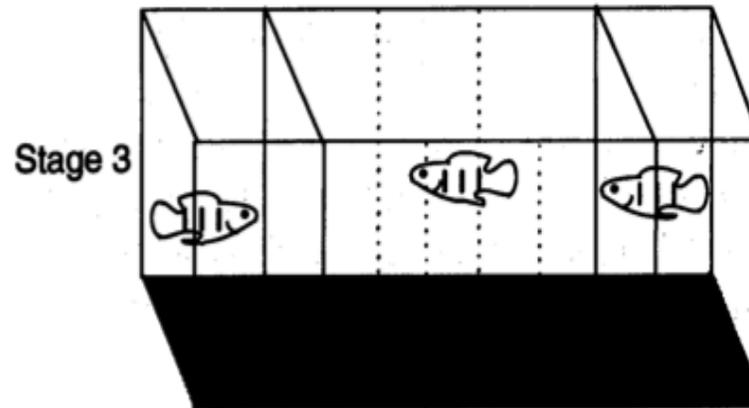
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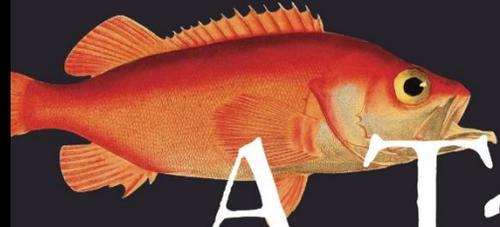
The female is constrained to the center. Each male is given a female, but the focal female can only see the less preferred male with a female.



The preference test is now repeated and the female changes her preference toward the previously less preferred male.



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*for the*

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