

Alex

Explain the origins of receiver biases. What are the main contributing factors? Are receiver biases evolved functions?

Ian

What differentiates the sensory exploitation hypothesis from the runaway sexual selection and good genes hypotheses?

Hannah

Why would females favor certain traits in males, when these traits show no direct effect to their reproductive successfulness?

Christine

The author defines sensory exploitation as the theory that males "evolve traits to exploit preexisting receiver biases, rather than preferences and traits coevolving via a genetic correlation." How do scientists determine that biases are "preexisting?" For example, in the case of the platyfish and swordtails, how did they confirm this theory of sensory exploitation? How is it possible for the platyfish to have a preference for swords that "predated the evolution of Xiphophorus and thus predated the evolution of swords"?

Heather

Does Ryan provide convincing examples of preexisting receiver biases in the cases of the fish and the frogs (pg. 2000)? After he mentions the examples, he states that in other studies, there was either not enough phylogenetic information necessary to determine the pattern of trait-preference evolution, or the phylogenetic information suggests that the preferred male trait has been lost. Does the information provided on the studies mentioned convince you that these cases could not be subject to these problems?

Chloe

The text mentions that some preferential traits may be "lost" in the male population. What does this mean, and why doesn't the trait reappear if there is such a stated female preference for it?

Heidi

Do traits evolved to suit female mating preferences also tend to help the males avoid predation? Some examples of the qualities in question are the complex songs of grackle males, the long tails of swordtail males, and the red beaks of zebra finch males.

Neal

In the case of zebra finches, shouldn't the females eventually adapt to realize that, unlike a red beak, the artificial red leg bands are not indicators of male fitness?

Cara

The article discusses how females are under strong selection to mate with males of their own species but it also gives many examples where females show preference for males exhibiting traits atypical to normal conspecific males (eg. grackles favoring varied calls). How are these two things reconciled and what effects do they have on the organism populations involved?

Thorson

This paper seems to imply that receiver biases are maladaptive. How this could be if the receiver bias encourages mating and produces male offspring that are more fit?

Britta

How do specific, sexually selected traits arise in only one sex? Does this mean that these traits are necessarily sex-linked? Are there traits that are selected for by one sex via sexual selection that are then seen in both sexes?

Indrani

In the introduction the author states that the concept he discusses "complements other approaches to understanding the evolution of female mating preferences", and in the conclusion he mentions that "the continued emphasis on runaway sexual selection and good genes models of preference evolution to the exclusion of other factors is unwarranted".

To what extent does this new concept complement older hypotheses of understanding the evolution of female mating preferences? For any given instance of sexual selection are we meant to approach these hypotheses as either/or possibilities or can the explanation be based on a combination?

Charlie

Why does Ryan say that a more "creative" experimental approach needs to be implemented in order to further explore receiver response biases? How might such an experiment work?

Also, can we please go over Fig. 3

Jeff

In the last sentence, Michael J. Ryan suggests that: "Strategies used by receivers to decode signals might not be optimal in any engineering sense, but might exhibit response patterns indicative of how ancestral receivers decoded signals." Ending the paper this way suggests that a receiver will actively seek out to reproduce a trait regardless of its effect on the species' survivorship. Isn't this detrimental to the species? If the species were in a high stress environment, do you think it would still seek useless traits? Does "what is sexy" minimize the importance Darwin placed on reproduction's correlation to survivorship?

Zach

How does receiver bias effect the variability of a population as a whole? What could differ in survivorship between an organism with

more fitness in other behaviors/traits and an organism that accommodates to a receiver bias?

Jessica

According to Ryan (1998), "female preferences are favored by natural selection if the preference influences the female's immediate reproductive success (p.1999)" but later in the paper we also learn about her receiver biases that may or may not have a direct effect on the survivorship of her offspring. From a standpoint that considers the motivation for sexual behavior, particularly a female's motivation for sexual behavior, to be driven by reproduction, what explanation does evolutionary theory offer for acute or exclusive homosexual behavior tendencies in animals, and female homosexual behavior in particular?

Carlie

If a trade-off exists for males with enhanced attractiveness (that results in increased mating success) and less survivorship, what are some possible reasons for such a trade-off having developed when there are many male species that have excellent mating success (without particular attractiveness that negates survivorship) and good survivorship as well?

Curran

This article mentions three current hypotheses for female preference evolution: runaway sexual selection, good genes selection, and sensory exploitation. Does the author give a convincing argument for the sensory exploitation hypothesis? We don't know the specifics of the experiments he cites, but do you think they help justify his argument?

Rosie

How do the hypotheses of runaway sexual selection and good genes selection suggest the correlation between female preferences

and male traits? How does the one under indirect selection evolve through the direct selection of the other?

Ben

Are there other definite examples of sensory exploitation outside of platyfish and swordtails? Is it ultimately possible to know the history of a given adaptation, such as the environmental pressures that led to the traits it may be derived from? Furthermore, how might traits that appear to be clearly caused by runaway sexual selection, such as a peacock's tail, be derived from other traits?