

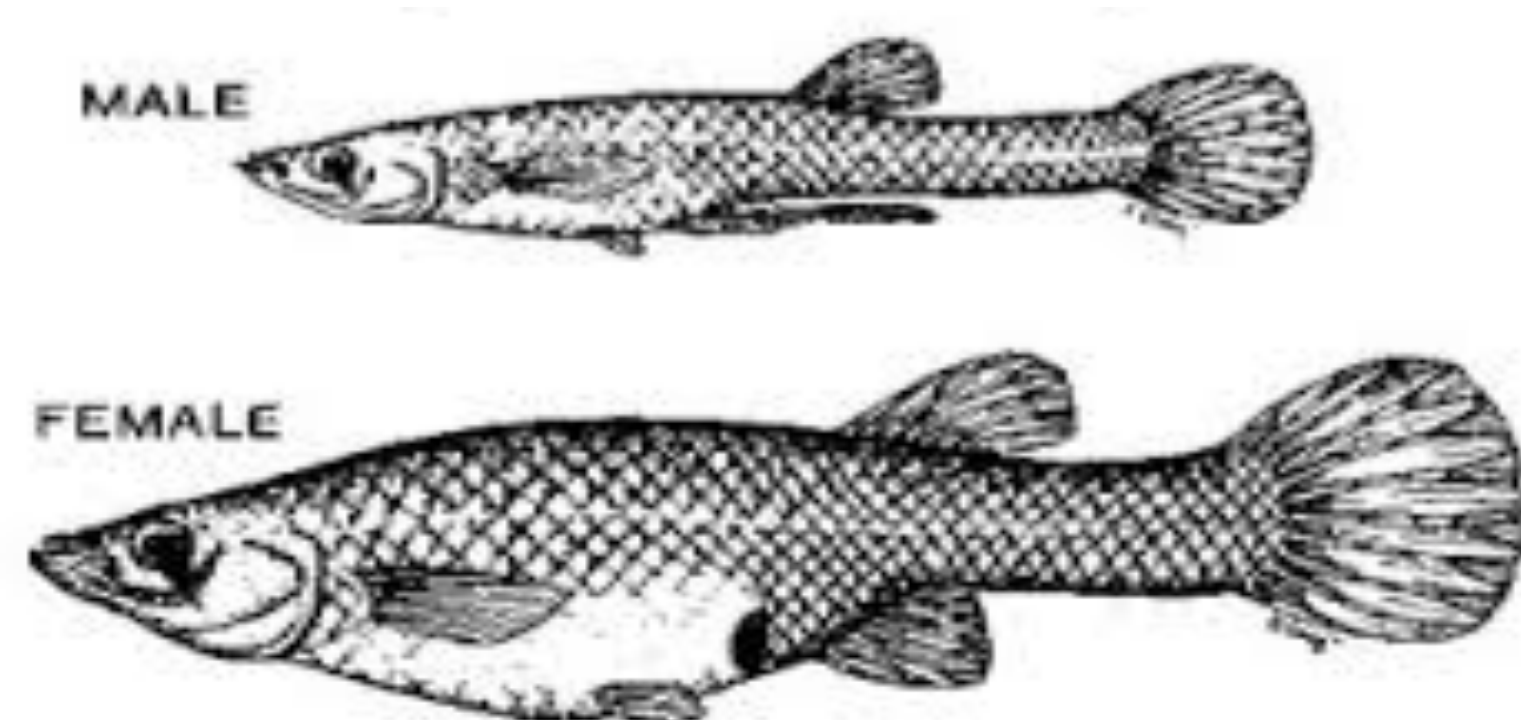
Do Female Guppies Prefer Orange-Tailed Males Over Yellow-Tailed Males During Mate Choice as a Result of Sexual Selection?

Ivy Bias, Henry Linford, Miles Brooks, and Ian Gates
Department of Biology, Utah State University, Logan, Utah, USA

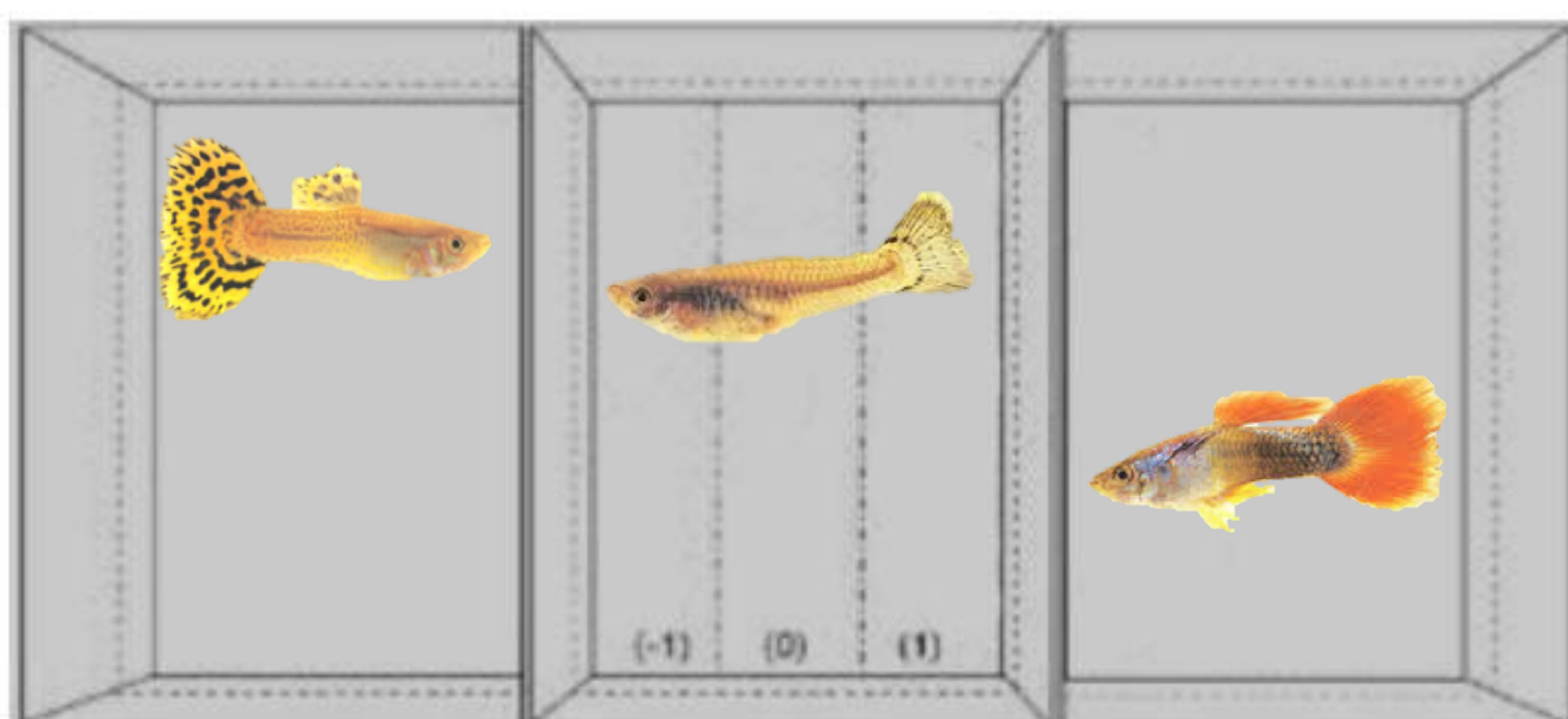


Introduction

Sexual selection is one of the most powerful forces involved in evolution. In previous studies sexual selection has been found to be a driving force in the evolution of the male guppy. In this study, we hypothesized that female guppies would be more interested in male guppy fish with orange tails than male guppy fish with yellow tails. We predicted the head of the female would be present more often on the side of orange-tailed males than the side of yellow-tailed males.



Methods



- A female guppy was placed in a divided tank with a male guppy of each tail color on either side.
- The middle section was visually divided into thirds and the amount of time females showed interest in each male was tracked. We performed 24 trials randomly selecting females and males each time.
- Interest was defined as the head of the female being present in the third of her visually divided section closest to the yellow-tailed or orange-tailed male.

Results

Percent of Time Females Spent with Each Colored Male

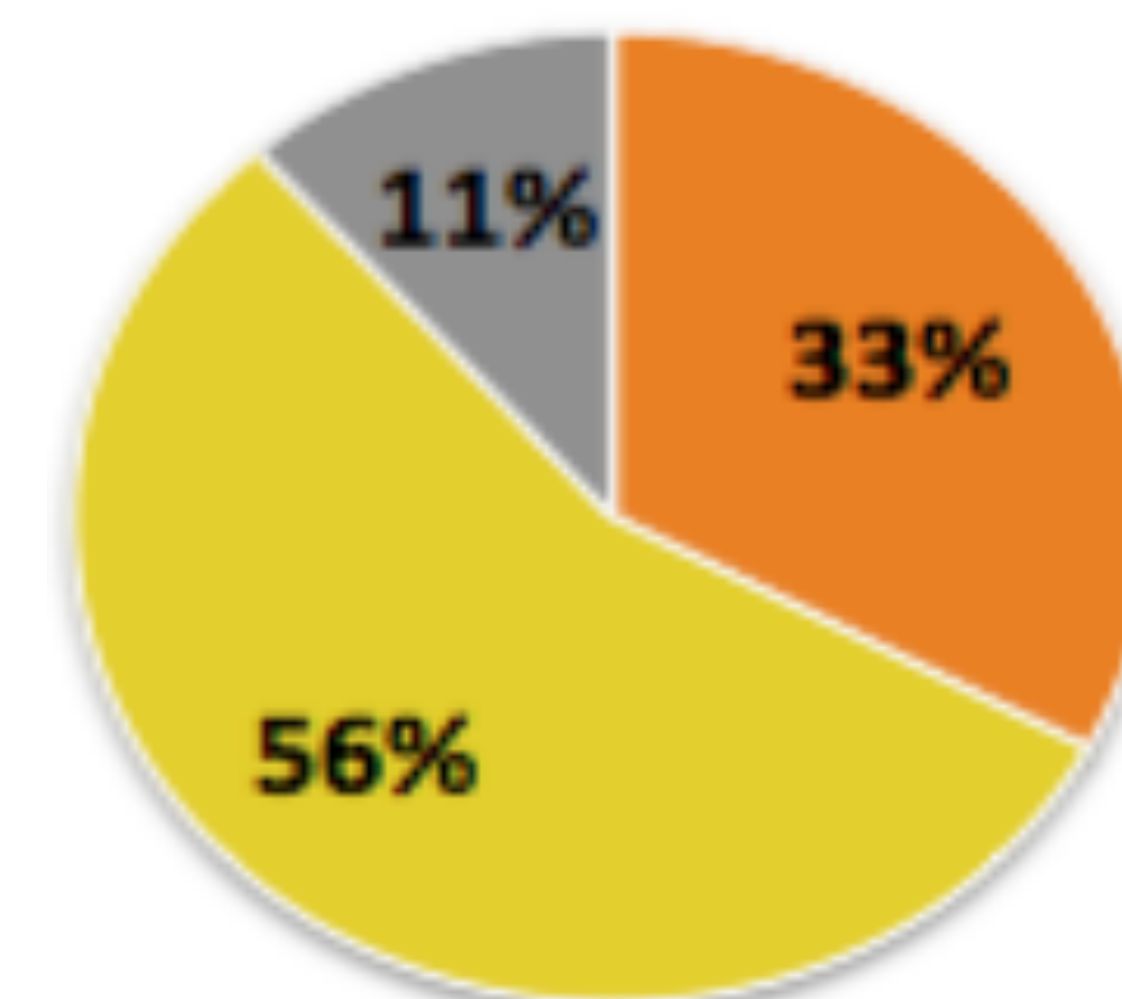


Figure 1. Percent of Time Females Spent with Each Colored Male. The yellow section represents the amount of time females spent in the yellow-tailed males' side of the tank. The orange section represents time females spent in the orange-tailed males' side of the tank. The grey section depicts the portion of time females showed no interest in either male.

Conclusions

- Female guppies capable of mating spent on average 56% of their time in the tank section near the yellow-tailed males compared to only 33% near the orange-tailed males.
- Our results suggest female guppies are more attracted to yellow-tailed males than orange-tailed males.

Acknowledgments

We would like to thank our professor Dr. Sullivan for assisting us in the experimentation and editing processes.

We would also like to show our appreciation for the Biology Department of Utah State University for funding our project.

Works Cited

Green Snakeskin Guppy. Digital image. Fancy Tail Guppy. N.p., n.d. Web.<<http://www.fancytailguppy.com/guppy-types.cfm>>.

USU IACUC #2294