

## Quiz 3

**Instructions:** Read each question carefully, and budget your time wisely. This quiz counts for 5 points, or 5% of your final grade. The lowest quiz grade of the semester will be dropped. Each question is worth 1 point.

1. Sympatric speciation of cichlids in Lake Victoria is based upon isolation driven by

SPECIALIZATION IN FEEDING HABIT

2. Management of the speciation process involves recognition of ESUs, or evolutionarily significant units.

To demonstrate ESUs, you need to demonstrate 1) that the groups are substantially reproductively isolated, and 2) COMPENSATE AN IMPORTANT COMPONENT OF THE EVOLUTIONARY LEGACY OF THE SPECIES.

3. How is it that predation gives rise to the observation that male guppies in some Trinidad streams are colorful, while those in other streams are drab?

IT'S AN OPTIMIZATION BETWEEN SURVIVAL + REPRODUCTIVE FITNESS

HIGH PREDATION SYSTEMS → DRAB IS NOT TO BE EATEN

LOW PREDATION SYSTEMS → CLEARLY, NO PREDATION TO INTERFERE WITH SHOWING YOUR MALE REPRODUCTIVE FITNESS

4. Is an individual or species more likely to compete for resources with a close relative or a distant relative? Why?

CLOSE RELATIVES

SIMILAR FUNDAMENTAL NICHES WITH REGARD TO SPACE, FOOD, + TIME USAGE + PREFERENCES

5. I did a survey of gut contents of bluegills and green sunfish in a particular ecosystem. I found that both graze on macroinvertebrates. Can I conclude that competition is an important factor in the interaction of the species? Why or why not?

NO.

YOU MUST SHOW THAT KEY RESOURCES ARE LIMITING + IMPACTIVE FITNESS.

Extra credit. The presence of algae-eating stonerollers has a strong effect on the amount of algae present in pools of Oklahoma streams, except during what two time-periods?

SPRING, WHEN FLOWING STREAMS OFFERED ALGAL ALTERNATIVE  
TIMES WHEN WATERS ARE MORE DOMINANT, (E.G. WINTER)