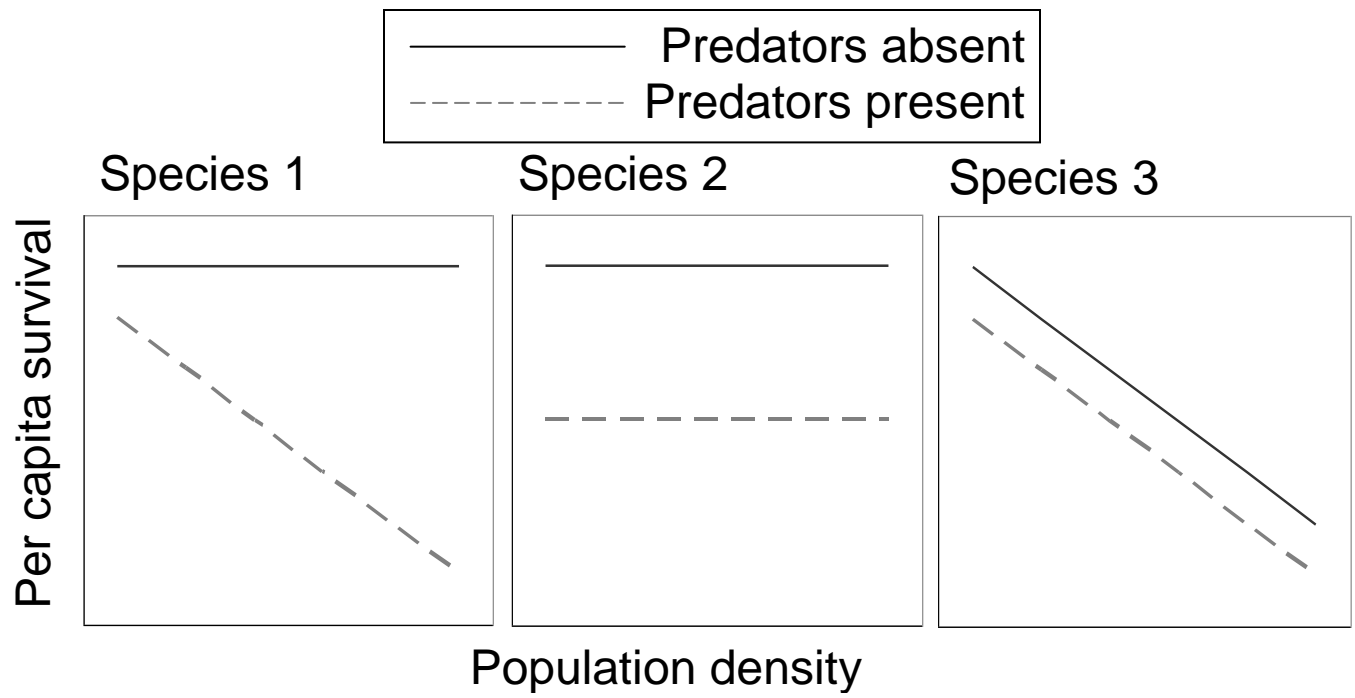


Round: 5A



These graphs show the survival of juvenile fish settling into two areas: one with predators, and one in which predators are experimentally excluded. Each graph represents a different species of juvenile fish.

1. Which species shows density-dependent mortality in both the presence and absence of predators? (3 pts)
2. In reference to Question 1, name one (1) possible cause for this non-predator dependent mortality pattern. (4 pts)
3. If a juvenile fish of Species 1 is placed in a natural environment, what is the probable cause of mortality (based on the evidence provided)? (3 pts)
4. Imagine a fish species in which survival is improved with increasing school size. This survival advantage only occurs in the presence of predators. In the absence of predators, there is no density-dependent advantage or disadvantage. Using the same axes as above, re-draw a new graph below representing survival in both scenarios. (7 pts)
5. What is the name for the phenomenon in which increased density results in increased survival? (3 pts)