The Asian shore crab invaded parts of the eastern coast of the United States about 15 years ago. The Asian shore crab preys on blue mussels. In the time since the Asian shore crab arrived, the average shell thickness has increased in the blue mussel population.

Which of the following is the most likely reason that this increase in shell thickness has occurred?

A. Blue mussels with thick shells attract more crabs than mussels without thick shells.

B. Blue mussels with thick shells grow in larger colonies than mussels without thick shells.

C. Blue mussels with thick shells catch more food per day than mussels without thick shells.

D. Blue mussels with thick shells survive and reproduce more successfully than mussels without thick shells.