tpo_10

The sea otter is a small mammal that lives in waters along the western coast of North America from California to Alaska. When some sea otter populations off the Alaskan coast started rapidly declining a few years ago, it caused much concern because sea otters play an important ecological role in the coastal ecosystem. Experts started investigating the cause of the decline and quickly realized that there were two possible explanations: environmental pollution or attacks by predators. Initially, the pollution hypothesis seemed the more likely of the two. The first reason why pollution seemed the more likely cause was that there were known sources of it along the Alaskan coast, such as oil rigs and other sources of industrial chemical pollution. Water samples from the area revealed increased levels of chemicals that could decrease the otters' resistance to life-threatening infections and thus could indirectly cause their deaths. Second, other sea mammals such as seals and sea lions along the Alaskan coast were also declining, indicating that whatever had endangered the otters was affecting other sea mammals as well. This fact again pointed to environmental pollution, since it usually affects the entire ecosystem rather than a single species. Only widely occurring predators, such as the orca (a large predatory whale), could have the same effect, but orcas prefer to hunt much larger prey, such as other whales. Third, scientists believed that the pollution hypothesis could also explain the uneven pattern of otter decline: at some Alaskan locations the otter populations declined greatly, while at others they remained stable. Some experts explained these observations by suggesting that ocean currents or other environmental factors may have created uneven concentrations of pollutants along the coast.

Now listen to part of a lecture on the topic you just read about. Well, ongoing investigations have revealed that predation [a difficult word for candidates: enunciate clearly] is the most likely cause of sea otter decline after all. First, the pollution theory is weakened by the fact no one can really find any dead sea otters washing up on Alaskan beaches. That's not what you would expect if infections caused by pollution started killing a lot of otters. On the other hand, the fact that it's so hard to find dead otters is consistent with the predator hypothesis: if an otter is killed by a predator, it's eaten immediately so it can't wash up on shore. Second, although orcas may prefer to hunt whales, whales have essentially disappeared from the area because of human hunters. That means that orcas have had to change their diet to survive, and since only smaller sea mammals are now available, orcas have probably started hunting those. So it probably is the orcas that are causing the decline of all the smaller sea mammals mentioned in the passage, the seals, the sea lions, and the sea otters. And third, the uneven pattern of otter decline is better explained by the orca predation theory than by the pollution theory. What happens to otters seems to depend on whether the location where they live is accessible to orcas or not. In those locations that orcas can access easily, the number of sea otters has declined greatly. However, because orcas are so large, they can't access shallow or rocky locations. And shallow a d rocky locations are precisely the types of locations where sea otter populations have not declined.

Summarize the points made in the lecture, being sure to explain how they respond to the specific points made in the reading passage.

Do you agree or disagree with the following statement? Playing computer games is a waste of time. Children should not be allowed to play them. Use specific reasons and examples to support your answer.