tpo_43

Agnostids were a group of marine animals that became extinct about 450 million years ago. Agnostid fossils can be found in rocks in many areas around the world. From the fossil remains, we know that agnostids were primitive arthropods—relatives of modern-day insects. However, the fossil information does not allow paleontologists to determine with certainty what agnostids ate or how they behaved. There are several different theories about how agnostids may have lived. Free-Swimming Predators First, the agnostids may have been free-swimming predators that hunted smaller animals. It is known that other types of primitive arthropods were strong swimmers and active predators, so it is reasonable that the agnostids may have lived that way as well. And while the agnostids were small, sometimes just six millimeters long, there were plenty of smaller organisms in the ancient ocean for them to prey on. Seafloor Dwellers Second, they may have dwelled on the seafloor. Again, there are examples of other types of primitive arthropods living this way, so it is possible that agnostids did too. On the seafloor they would have survived by scavenging dead organisms or by grazing on bacteria. Parasites Third, there is the possibility that the agnostids were parasites, living on and feeding off larger organisms. One reason that this seems possible is that there are many species of modern-day arthropods that exist as parasites, such as fleas, ticks, and mites. The agnostids might have lived on primitive fish or even on other, larger arthropods.

Now listen to part of a lecture on the topic you just read about. Unfortunately, each of the three theories about how agnostids lived has a serious weakness. First, we know that other types of arthropods swam in the open ocean, hunting their prey. However, all of those arthropods had large, well-developed eyes. Vision is one of the best ways for a predator to track its prey. But agnostids had tiny, poorly-developed eyes and were sometimes completely blind! This seems to rule out the idea that they were predators. If they did chase after prey, they would have had some other, special sensory organ to help them find prey, but there's no evidence of this in the fossil record. Second, it seems unlikely that agnostids lived on the seafloor. Animals that are seafloor dwellers typically don't have the ability to move very fast or very far. They move slowly across the seafloor and stay in localized areas rather than spreading to new areas. So, typically we find each seafloor dweller species occupying a small geographic area where it had originated and nowhere else. However, many agnostid species inhabited multiple geographic areas spread across large distances. This suggests that agnostids were able to move from one area to another pretty fast. The ability to move easily across large distances would be highly unusual for seafloor dwellers. Finally, the parasite theory. Well, one thing that's typical of parasites is that their populations are not very large. Parasite populations have to stay within certain limits, because if there were too many parasites, they would kill off the host organisms they live on. But we're pretty sure that the populations of many agnostids were in fact very large. We can tell because for many species we've been able to find vast amounts of fossilized individuals. So, the great size of agnostid populations seems to rule out the theory they were parasites.

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

Imagine that you are in a classroom or a meeting. The teacher or the meeting leader says something incorrect. In your opinion, which of the following is the best thing to do? --Interrupt and correct the mistake right away --Wait until the class or meeting is over and the people are gone, and then talk to the teacher or meeting leader --Say nothing Use specific reasons and examples to support your answer.