***TPO 45- task1***

Both the reading and lecture are discussing the possibility of the existence of the bees, kind of insect, in 200 million years ago. According to the passage, there are several theories which refute the existence of the bees based on fossil observation. The lecturer, on the other hand, believes that those hypotheses are not compelling and there is still a chance for assuming the existence of these insects in early time.

First, the reading states that the earliest fossils which have been found in Arizona is for 100 million years ago, so it cannot be the evidence for the 200-million-year old bee. the professor, however, contradicts this claim by saying that although it is true that no fossil record has been made belonging to the 200 million years ago but this fossil record shortage can have other reason. Since the fossils may have remained in the sticky liquid exuded by the trees and those trees have not existed in the early time, so there is a possibility that bees have existed but the fossils could have not been preserved.

Second, the passage makes the point that since the bees devour the flower plants and these plants had not been appeared since 125 million years ago, it is improbable bees could have lived before that time. the professor accepted the fact that bees have the biological dependence on the flowering plant but he rejects the hypothesis by pointing out that 200 million-years-old bee might have fed by non-flowering plants existed in early time, and today feeding habitual can be the result of evolution.

Finally, the author of the reading introduces the last hypothesis notes that according to the modern bees’ caps which have the spiral motif, it was predicted that fossils of bees should have the same instruction but fossilized chambers lack such caps. The professor refutes the theory by pointing out the identical chemical composition between the fossils record and the modern bees. He explained that modern bees have the defensive and water-proof matter for protecting their nest, the same material has been discovered in the fossils which can be the evidence for the existence of the bees in early time.