 Plant Gas Scientists have been studying natural sources of methane for decades but hadn’t regarded plants as a producer，notes Frank Keppler，a geochem[st at the Max Planck Institute for Nuclear Physics in Heidelberg，Germany1.Now Keppler and his colleagues find that plants，from grasses to trees，may also be sources of the greenhouse gas.This is really surprising，because most scientists assumed that methane production requires an oxygen-free environment. Previously，researchers had thought that it was impossible for plants to make significant amounts of the gas.They had assumed that，microbes2 need to be in environments without oxygen to produce methane.Methane is a greenhouse gas，like carbon dioxide.Gases such as methane and carbon dioxide trap heat in Earth’s atmosphere and contributeto global warming. In its experiments，Keppler’s team used sealed chambers that contained the same concentration of oxygen that Earth’s atmosphere has.They measured the amounts of methane that were released by both living plants.and dried plant material，such as fallen leaves. With the dried plants，the researchers took measurement at temperatures ranging from 30 degrees Celsius to 70 degrees C.At 30 degrees C，they found，a gram of dried plant material released up to 3 nanograms of methane per hour.(One nanogram is a billionth of a gram.) With every 10-degree rise in temperature，the amount of methane

released each hour roughly doubled. Living plants growing at their normal temperatures released as much as 370 nanograms of methane per gram of plant tissue per hour.Methane emissions tripled when living and dead plant was exposed to sunlight. Beeause there was plenty of oxygen available，it ’s unlikely that the types of bacteria that normally make methane were involved. Experiments on plants that weregrown in water rather than soil also resulted in methane emissions.That ’s another strong sign that the gas came from the plants and not soil microbes. The new finding is an “ interesting observation, ” says Jennifer Y.King，a biogeochemist at the University of Minnesota in St.Paul3.Because some types of soil microbes consume methane，they may prevent plant-produced methane from reaching the atmosphere.Field tests will be needed to assess the plant ’s influence，she notes. 词汇: methane/5meWein/n.甲烷，沼气 emission/i5miFEn/n.散发，发射 geochemist n.地球化学家 triple/5tripl/v.增加三倍.adj.三倍的 Celsius n.&amp..adj.摄氏(的) bacteria/bAk5tiEriE/n.(bacterium 的复数)细菌 microbe/5maIkrEJb/n.微生物 nanogram n.微克 biogeochemist n.生物地球化学家 chamber/5tFeimbE(r)/n.室，房间.腔 注释： 1. the Max Planck Institute for Nuclear Physics in Heidelberg，Germany：马克思普朗克核物理研究所，位于德国海德堡。海德堡系德国西南部城市，在巴登一符腾堡州的内卡河畔。海德堡大学是德国历史最悠久的大学。 2. microbe：细菌，意义同bacterium(bacteria的单数形式)。但microbe不用作专门术语。 3. St.Paul：圣保罗，美国明尼苏达州首府。 练习： 1. What was scientists understanding of methane? A h was

produced from plants. B It was not a greenhouse gas. C It was produced in oxygen-free environments. D It traps more heat than any other greenhouse gas. 2. To test whether plants are a sot， roe of methane， the scientists created A a oxygen-free environment. B an environment with the same concentration of oxygen as the Earth has. C a carbon dioxide-free environment. D an environment filled with the greenhouse gas. 3. Which statement is true of the methane emissions of plants in the experiment? A The lower the temperature ， the higher the amount of methane emissions. B I.iving plants release less methane than dried plants at the same temperature. C When exposed to sunlight， plants stop releasing methane. D The higher the temperature， the greater the amount of methane emissions. 4. Which of the following about methane is Not mentioned in the passage? A Plants growing in soil release methane. B Plants growing in water release methane. C Soil microbes consume methane. D Microbes in plants produce methane. 5. What is the beneficial point of some microbes consuming plant-produced methane? A Methane becomes less poisonous. B Methane is turned into a fertilizer. C Less methane reaches the atmosphere. D Air becomes cleaner. 答案与题解： 1. C 短文的第一和第二段都讲到，科学家过去曾经认为，沼气必须在无氧的环境中才能产生。注意，作者用的是过去式：Most scientists assumed that...They had assumed that...。 2. B 第三段第一句说，科学家使用密封的房间来做实验，房间里氧气的浓度与地球大气中的氧气浓度相仿。所以B句符合原文的意思，其他三个选择则不符合原文内容。 3. D 根据第四和第五段的内容，只有D是

正确的说法。温度越高沼气的释放量越高，有生命的植物释放的沼气远大于干植物的释放量，在阳光下，它们的沼气释放量是正常情况的三倍。 4. D 最后两段告诉我们，无论在土壤中还是在水中生长的植物都能释放沼气，土壤中的微生物消耗沼气，使沼气不至于进入空气。所以A、B、C的内容均符合短文最后两段中作者的意思。D的内容短文中没有提到。 5. C 最后一段的第二句可以找到本题的答案。 