## TPO1-Listening-Marmots

Narrator: Listen to part of a lecture in a biology class.

Professor: For today’s discussion, we’ll review the case study on how some animals have behaviorally adapted to their environments. Now you had to read about two animal species, the Eastern marmot and the Olympic marmot. Marmots are rodents. They are large ground squirrels, about the size of an average house cat. And they live in a variety of habitats. And even though they spend the significant portion of the year hibernating, according to this case study, marmots are still considered excellent subjects for animal behavioral studies. Why is that?

Student: Well, when they are not hibernating, you can find them in open areas. And they are pretty active during the day, which makes them easy to observe, right?

Professor: Uh-ha, so first let’s discuss the Eastern marmots. They reside throughout the eastern region of North America where there is a temperate climate, where the growing season lasts for at least five months of the year, which is when they do all their mating, playing and eating.

Student: Oh, I see. At first I wasn’t sure what growing season meant, just from the reading, but now I get it. It's the amount of time it takes for them to grow, right? So it would be five months?

Professor: Umm? Oh, uh… I’m sorry but no. It has nothing to do with that. It's not about the time it takes for Eastern marmots to grow. It’s when the food is available. That is when it’s not covered in snow and there is no frost covering the grass and, umm, vegetative parts of a plant’s herbs and the flowers the marmots like to eat. So growing season refers to the availability of the food they eat, OK? So now how would you describe the Eastern marmots’ social habits?

Student: Well, they are really territorial, and loners, and just so aggressive even with other Eastern marmots. And their mating ritual is just so impersonal.

Professor: Uh-ha? Now when they emerge in the spring from hibernation, the mating process begins. For them, well, they come together to mate and then they go their separate ways. Then about six to eight weeks after birth, the offspring leave their mothers.

Student: Really? Just six weeks? Is that possible for the offspring to make it on their own so young?

Professor: Well, it’s not as if they aren’t ready for the real world because they are. Remember, they mature quickly and the weather’s nice. Also they live in open fields where there is lots of edible vegetation. So roughly six weeks after birth, Eastern marmots are just old enough to take their chances of surviving in the temperate environment. So how does this relate to their behavior?

Student: Oh, I get it. Since the climate’s not too bad, the Eastern marmots don't have to rely on each other too much and they really don't need to stay together as a family to survive either.

Professor: Uh-ha. Any contrast, the Olympic marmots? What about them?

Student: Well, they live together as a family and take care of their young until they are at least two years old. They’re really friendly with each other. And what I really like is that they even have greeting ceremonies. And they are not at all aggressive and territorial like the Eastern marmots. So their social behavior is so different from Eastern marmots because of the climate where they live? That seems so bizarre.

Professor: Well, the Olympic marmots inhabit meadows high in the Olympic Mountains where the weather conditions are much harsher. So there is a lot more wind and snow. The growing season only lasts about two to three months. So in that much shorter period of time, all the Olympic marmots, male and female, eat, play, work and nurture the young together. Because the climate is so harsh, cooperation increases the survival rate of the Olympic marmots. They keep their young at home until they are physically able to survive on their own. This could explain why the social behavior of the Olympic marmots is so unlike that of the Eastern marmots.

## Translate

旁白：听生物课的一部分演讲。

教授：在今天的讨论中，我们将回顾一些动物如何在行为上适应环境的案例研究。现在你必须阅读两种动物物种，东部土拨鼠和奥运土拨鼠。旱獭是啮齿动物。他们是大型地松鼠，大约是普通家猫的大小。他们生活在各种栖息地。根据这个案例研究，即使他们花费了冬眠的大部分时间，但土拨鼠仍然被认为是动物行为研究的优秀受试者。这是为什么？

学生：当他们没有休息时，你可以在空旷的地方找到他们。他们在白天非常活跃，这使得他们很容易观察，对吧？

教授：呃，首先让我们来讨论一下东部的旱獭。他们居住在温带气候的北美东部地区，那里的生长季节至少持续五个月，这是他们完成所有交配，玩耍和吃东西的时间。

学生：哦，我明白了。起初，我不确定生长季节的意义，只是从阅读中，但现在我明白了。这是他们增长所需的时间，对吧？那会是五个月？

教授：嗯？哦，呃...我很抱歉，但没有。它与此无关。这与东部土拨鼠的成长时间无关。这是什么时候食物可用。那就是当它没有被雪覆盖，没有霜覆盖在草地上，而且，嗯，植物的植物的营养部分和土拨鼠喜欢吃的花。所以生长季节是指他们吃的食物的可用性，好吗？那么现在你会如何描述东方旱獭的社交习惯呢？

学生：呃，他们真的是领土人，孤独者，甚至和其他东部的土拨鼠一样激进。他们的交配仪式非常没有人情味。

教授：呃哈？现在，当他们从冬眠中出现在春天，交配过程就开始了。对他们来说，好吧，他们聚在一起交配，然后他们分道扬their。然后在出生后约六至八周，后代离开他们的母亲。

学生：真的吗？短短六周？对于后代来说，这可能会让自己变得如此年轻吗？

教授：嗯，这并不像他们没有准备好现实世界，因为他们是。请记住，他们很快成熟，天气很好。他们也住在有很多可食植物的开阔地里。大约在出生六周后，东部的土拨鼠已经够年龄了，能够在温带环境中幸存下来。那么这与他们的行为有什么关系呢？

学生：哦，我明白了。由于气候条件不错，东部的土拨鼠不必太依赖彼此，他们也不需要为了生存而保持在一起。

教授：呃哈。任何对比，奥运旱獭？他们呢？

学生：他们作为一个家庭共同生活，照顾他们的年轻人，直到他们至少两岁。他们非常友好。而我真正喜欢的是他们甚至有问候的仪式。它们并不像东部的旱獭那样具有攻击性和领土性。所以他们的社交行为与东方的土拨鼠有很大的不同，因为他们生活的气候？这似乎很奇怪。

教授：奥运会的土拨鼠居住在天气条件更加恶劣的奥林匹克山高处的草地上。所以有更多的风和雪。生长季节仅持续两到三个月。因此，在那么短的时间内，所有的奥运旱獭，男性和女性，一起吃饭，玩耍，工作和培育年轻人。由于气候如此苛刻，合作提高了奥运旱獭的成活率。他们将自己的年轻人留在家中，直到他们能够靠自己生存。这可以解释为什么奥林匹克土拨鼠的社会行为与东部土拨鼠不同。