Botany LS1203: ***Private Life of Plants: Branching Out***

1. During the introductory sequence of the *Branching Out*, David Attenborough states that, "Plants live on a different time scale than animals." Provide three examples which he uses to illustrate this statement. What technology do we use today to bring plants to our time scale?

2. Early in the video, Attenborough lists three survival problems that plants face. What are these three problems?

3. Besides the positioning movements that plants make in one place, plants can also spread to occupy new spaces. How does bramble accomplish this?

4. The greatest distances that plants can travel is during the seed stage (± fruit). What advantages do trees have, compared to low growing plants, for wind dispersal of seeds?

5. How are seeds of (a) cottonwoods and (b) sea beans dispersed? Very few seeds of these plants survive and germinate. Why isn't this a problem?

6. As the video moves from physical mechanisms of seed dispersal to the use of living couriers, Attenborough talks about "chance encounters" vs. "entic[ing] with tempting rewards." Give two examples of each from the video.

7. Compare dispersal of truia seeds by the Indian rhinoceros with that of acacia seeds by African elephants. Address whether or not the animals provide simply seed dispersal or an additional and specific service for the respective plant. If the animals were to go extinct, what is the possible fate of the respective plant and why?

8. Some seeds aren't just dispersed; they're planted. Describe two examples of this from the video.

9. Numerous *Protea* species in southern Africa are fire adapted. How does this work with regard to seed dispersal and seedling survival?

10. In closing, Attenborough describes seeds as travelers in both space and time. What did he mean by that?