

Symbiotic Relationships between Plants and Insects



What is Symbiosis?

Symbiosis is a long-term interaction between two organisms (animals, plants, bacteria, etc.) that live closely together. An example includes the **pollination** of flowers by bees so that plants can continue to grow.

Interesting Fact!

35% of all the crop production in the world depends in pollinators like bees.

What are the different types of symbiosis?

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What is the symbiotic relationship between plants and insects?

Plants and insects have a very close relationship and are integral to each other's existence. Without plants, insects would lose a major source of food and protection (they live in and are camouflaged by the plants). Without insects, plants would lose a major source of protection and pollination. Their symbiotic relationship is both physical and chemical. There is a wide range of symbiotic relationships between plants and insects.

Symbiosis – Symbiosis is a close and long-term interaction between two organisms (animals, plants, bacteria, etc.) that live closely together.

Pollination – The transfer of pollen from one plant to another to allow fertilization to occur.

Since plants and insects have been living closely together for a very long time, it is thought that they have **coevolved**. This means that over time, they adapted and changed to help each other survive. However, these adaptations do not always move towards a mutualistic relationship. For example, Aphids are insects that live on plants and eat the sap of the plants that they live on. This is a parasitic relationship as one species benefits at the expense of the other. To combat this, over time, plants formed a relationship with ladybugs who live on them and who eat the Aphids. The plant and the ladybugs have a mutualistic relationship.



Aphid

What are some different types of plant/insect interactions?

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Coevolved – Evolution that occurs between two species at the same time that benefits both. For example, an insect may evolve certain parts that allow it to feed on a certain plant, at the same time, the plant will evolve certain physical structures that allow it to be pollinated by that insect.

Reading Comprehension Questions:

1. What is symbiosis?
2. List three
3. What is the relationship between ladybugs and plants and aphids?
4. Why
5. What are some mutualistic relationships between plants and insects not involving pollination?

Extension Questions:

6. What do you think is the relationship between ants and plants?
7. Research

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Pictures

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