

Meta Title: The Role of Snails in Pollination: An Overview

Meta Description: Did you know that snails can play a role in plant reproduction? In this overview, we explore the fascinating world of pollination by snails or malacophily.

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What is Pollination by Snails?

Pollination by snails is a type of pollination that occurs when snails transfer pollen from one plant to another as they move about. Pollination is the process by which plants reproduce sexually, producing seeds that will eventually grow into new plants. Pollen is a fine, powdery substance that contains the male reproductive cells of plants. In order for pollination to occur, pollen must be transferred from the male parts of a plant (stamen) to the female parts of a plant (pistil).

There are many different ways that pollination can occur, including pollination by insects, birds, mammals, wind, and water. Pollination by snails is relatively rare compared to other forms of pollination, but it can be important for certain plant species, particularly in environments where other forms of pollination are scarce. Snails are able to pollinate plants in a variety of ways. They may transfer pollen directly from one plant to another as they crawl over the plants, or they may carry pollen on their bodies or shells. Some snails even have specialised structures, such as tentacles or proboscises, that are used to collect and disperse pollen.

How Do Snails Help in Pollination?

Snails can help in pollination by crawling over the surface of a plant's flowers, picking up pollen on their slimy bodies, and transferring it to other flowers as they move around. This can occur when snails come into contact with the reproductive structures of a plant, such as a stamen or a pistil, and transfer pollen from one to the other.

What is Malacophily Pollination?

Malacophily is a type of pollination in which snails play a role in the transfer of pollen from one plant to another. This form of pollination is relatively rare and is typically seen in certain types of plants, such as the flowers of some orchids.

Pollination by Snails Examples

There are several examples of plant species that are known to be pollinated by snails. Some examples include:

1. Stylidium snail-pollinated (*Stylidium* spp.): These plants are found in Australia and are pollinated by a variety of snail species, including the black-banded snail (*Cingulina cingulate*) and the green snail (*Cyclophorus hirtellus*).
 2. Foxglove (*Digitalis* spp.): Some species of foxglove, such as *Digitalis purpurea*, are known to be pollinated by snails.
 3. Venus flytrap (*Dionaea muscipula*): This carnivorous plant is pollinated by snails in addition to insects.
 4. Cactus (Cactaceae): Some species of cactus, such as the fishhook barrel cactus (*Ferocactus wislizeni*), are known to be pollinated by snails.
 5. Limnanthaceae: This plant family includes several species that are pollinated by snails, such as *Limnanthes douglasii* and *Limnanthes alba* (meadowfoam).
- Some species of orchids, such as the man orchid (*Aceras anthropophorum*) and the pyramidal orchid (*Anacamptis pyramidalis*) rely on snails to transfer pollen between flowers. The man orchid, for example, has a strong scent that attracts snails to its flowers, and the flowers have a structure that allows the snails to easily crawl inside and transfer pollen. The pyramidal orchid, on the other hand, has a bright colouration and a slightly curved lip that guides snails to the reproductive organs of the flower.
 - The flowers of some plants in the genus *Arum* are also known to be pollinated by snails, such as the lords-and-ladies (*Arum maculatum*) and the wild arum (*Arum italicum*). Both of these plants have a distinctive smell, which attracts snails to their flowers, and the flowers have a structure that allows the snails to crawl inside and transfer pollen.
 - Some species of lily, such as the snake's head fritillary (*Fritillaria meleagris*), have flowers that are adapted for pollination by snails. The flowers of the snake's head fritillary have a structure that allows snails to crawl inside and transfer pollen, and the flowers are also known to produce a strong scent that attracts snails to them.
 - Grandiflora, the European snail-flower (*Vaginaria grandiflora*), is a plant that is specifically adapted for pollination by snails and has a structure that allows snails to

easily crawl inside and transfer pollen. The flowers of this plant are typically small, greenish-white and are arranged in clusters, which are visited by snails.

FAQs

1. Do snails actively seek out plants for pollination?

It is not known if snails actively seek out plants for pollination, but some plants are known to produce a strong scent or bright colouration that can attract snails to their flowers. Additionally, many plants that rely on pollination by snails have flowers that are adapted to allow snails to easily crawl inside and transfer pollen.

2. What types of plants rely on pollination by snails?

Examples of plants that rely on pollination by snails include some species of orchids, such as the man orchid and the pyramidal orchid, plants in the genus *Arum* such as lords-and-ladies and wild arum, and some species of lily, such as the snake's head fritillary, and European snail-flower.

3. Do snails have any other role in the ecosystem?

Snails play an important role in many ecosystems as a food source for many animals and as decomposers. They also help in nutrient cycling and can act as seed dispersers.

4. Are there any conservation measures for plants that rely on malacophily?

Conservation measures for plants that rely on malacophily would depend on the specific species and ecosystem. These measures could include protecting and preserving habitats for snails, as well as monitoring populations of both the plant and snail species.

5. Is malacophily found in any other organisms other than snails?

As far as it is known, malacophily is found only in snails, but it's possible that other organisms might exhibit similar behaviour, but it is not well studied yet.

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