



pLatform for INnovation in Natural science onlinE education

PLANT WORLD DIGITAL TRAINING RESOURCE

Developed by Vilnius University – Botanical Garden



**Vilnius
University**




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A photograph of a lush forest floor. The ground is covered with a dense carpet of green ferns and mosses. Many fern fronds are visible, some showing signs of being eaten by insects. Several bright yellow dandelions are scattered among the greenery. In the background, the trunks of trees are visible, suggesting a forest setting. The overall scene is vibrant and natural.

Ferns and mosses

A close-up photograph of vibrant green moss. Several upright, curled stems are prominent, showing the intricate, feathery texture of the moss. The background is a soft, out-of-focus green, suggesting a dense carpet of moss.

We'll learn about these amazing plants that don't have flowers or seeds like most other plants



Ferns are green plants that have feathery leaves called fronds.



They reproduce by spores instead of seeds.



A fern has three main parts: roots, stems, and fronds.



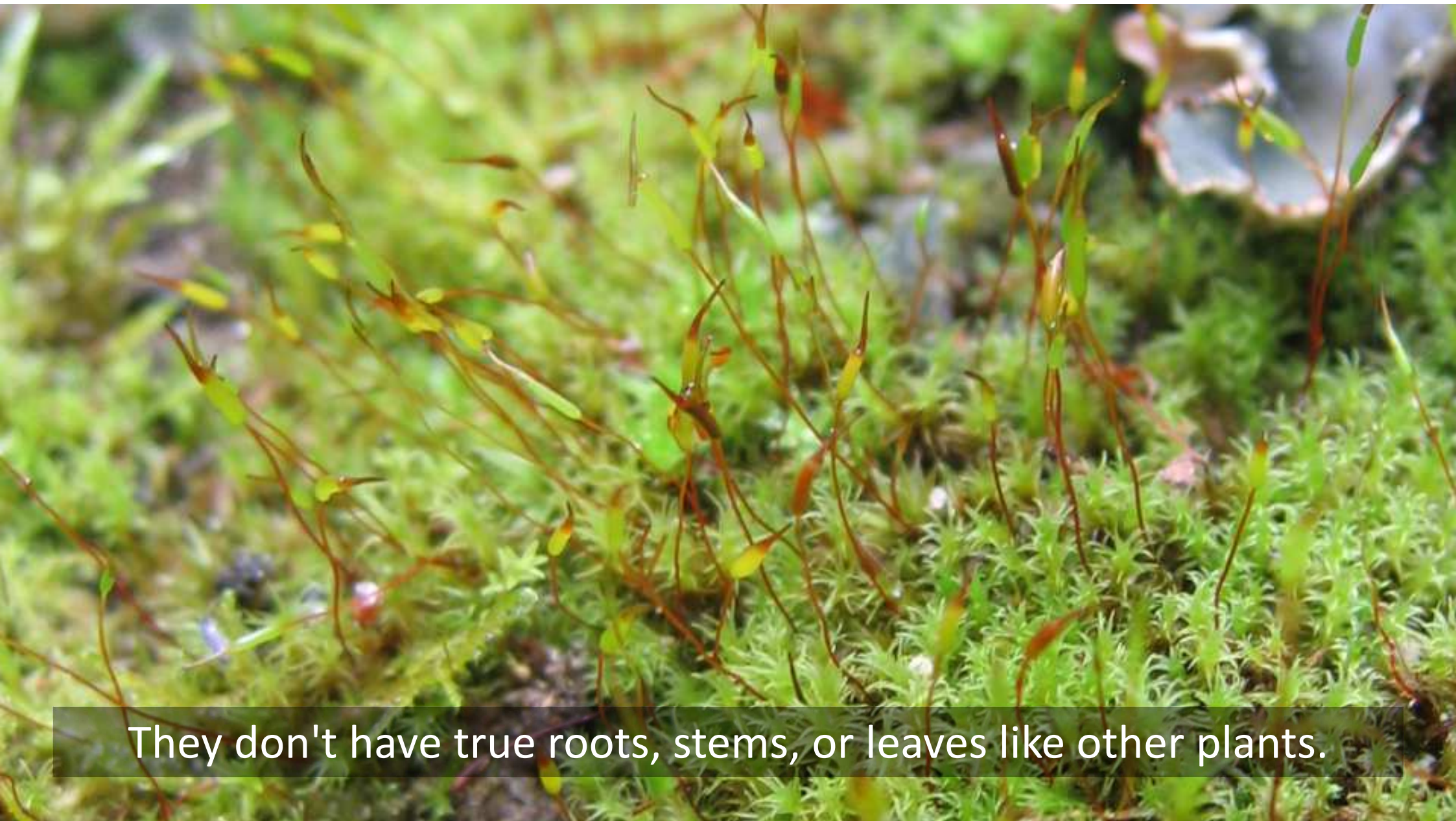
Ferns have a unique life cycle. They start as spores, which grow into tiny heart-shaped plants called gametophytes. These gametophytes produce eggs and sperm, which combine to form a new fern plant.



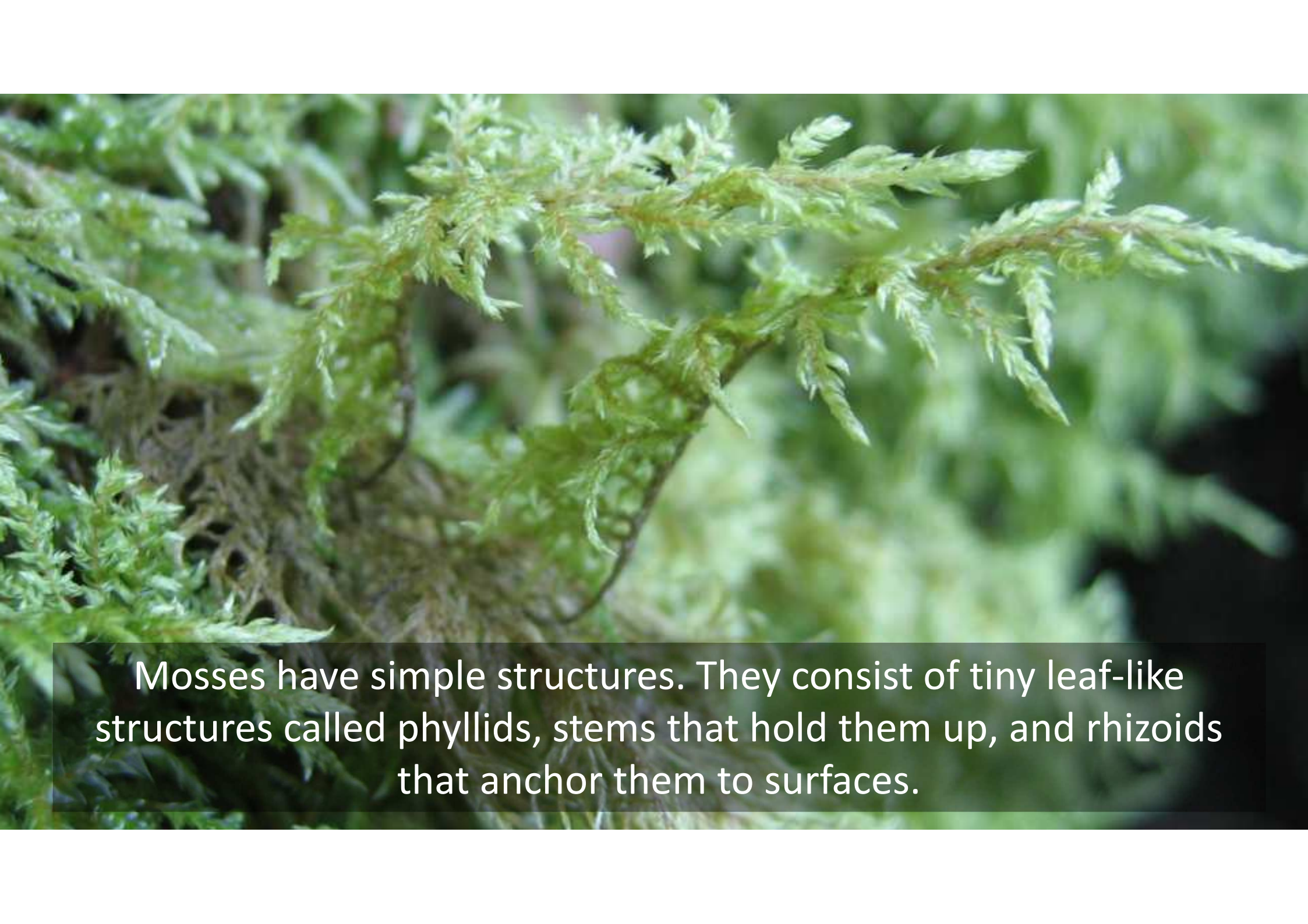
Ferns play an essential role in ecosystems. They provide habitat for animals, prevent soil erosion, and contribute to the health of forests. Some ferns are also used in medicine and gardening.



Mosses are small green plants that grow close together in clumps or mats.

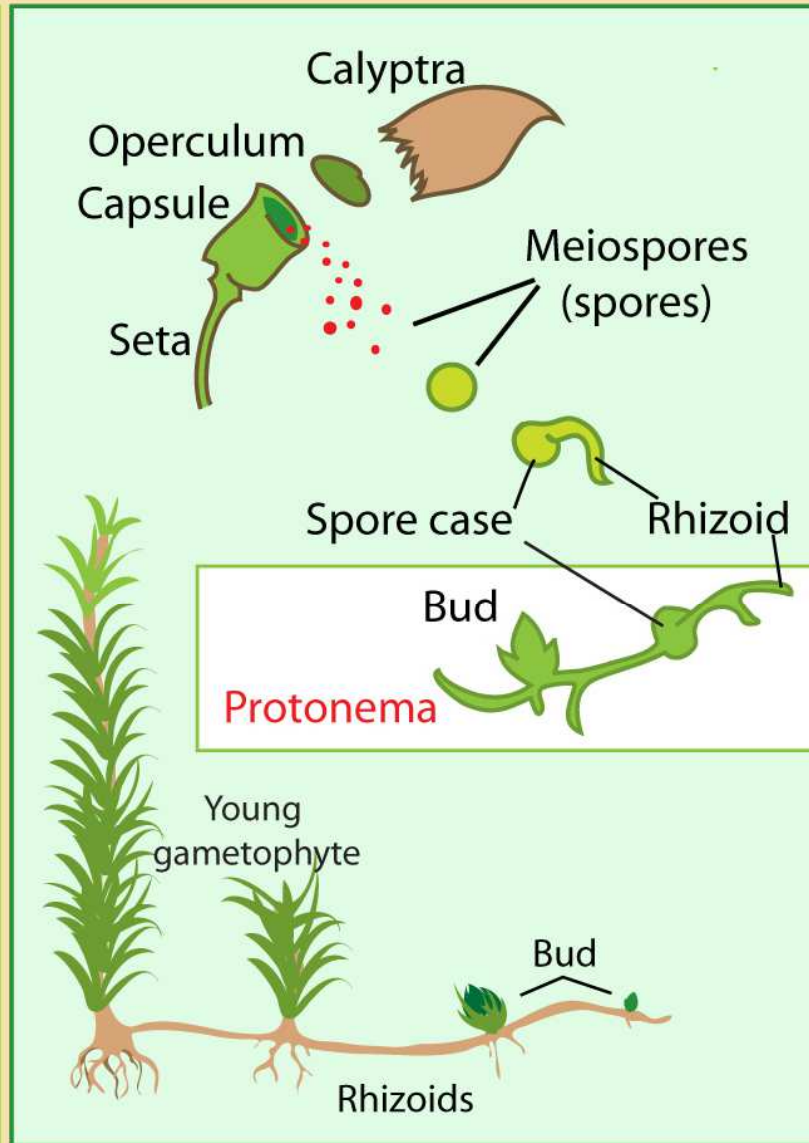
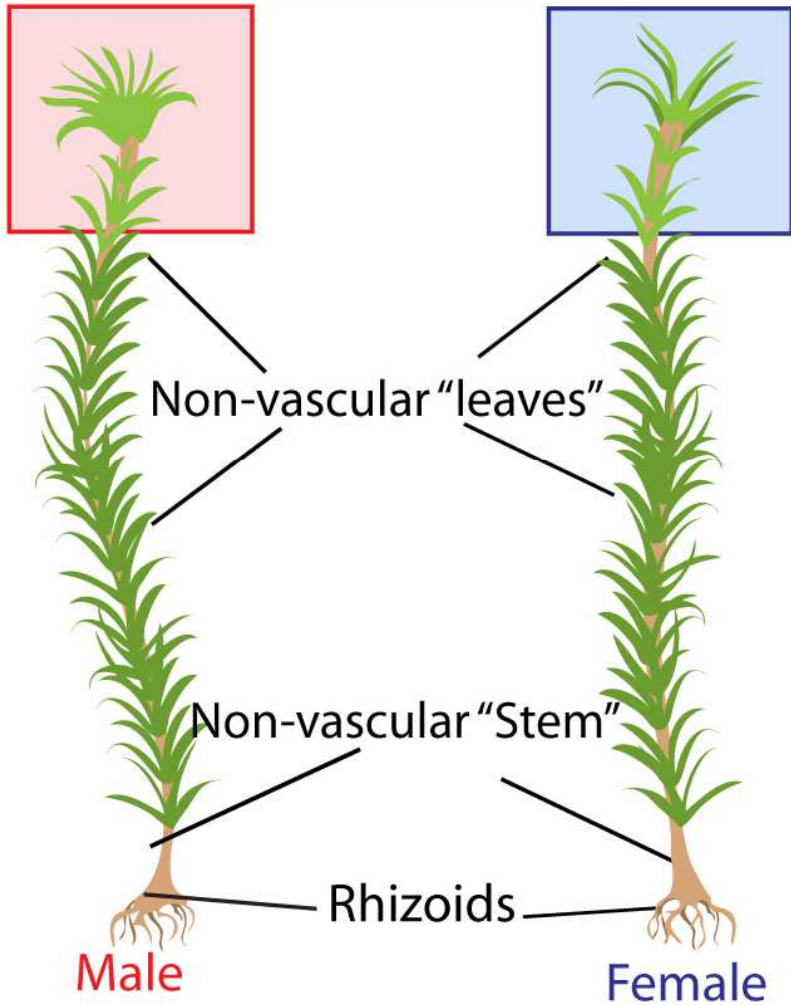


They don't have true roots, stems, or leaves like other plants.

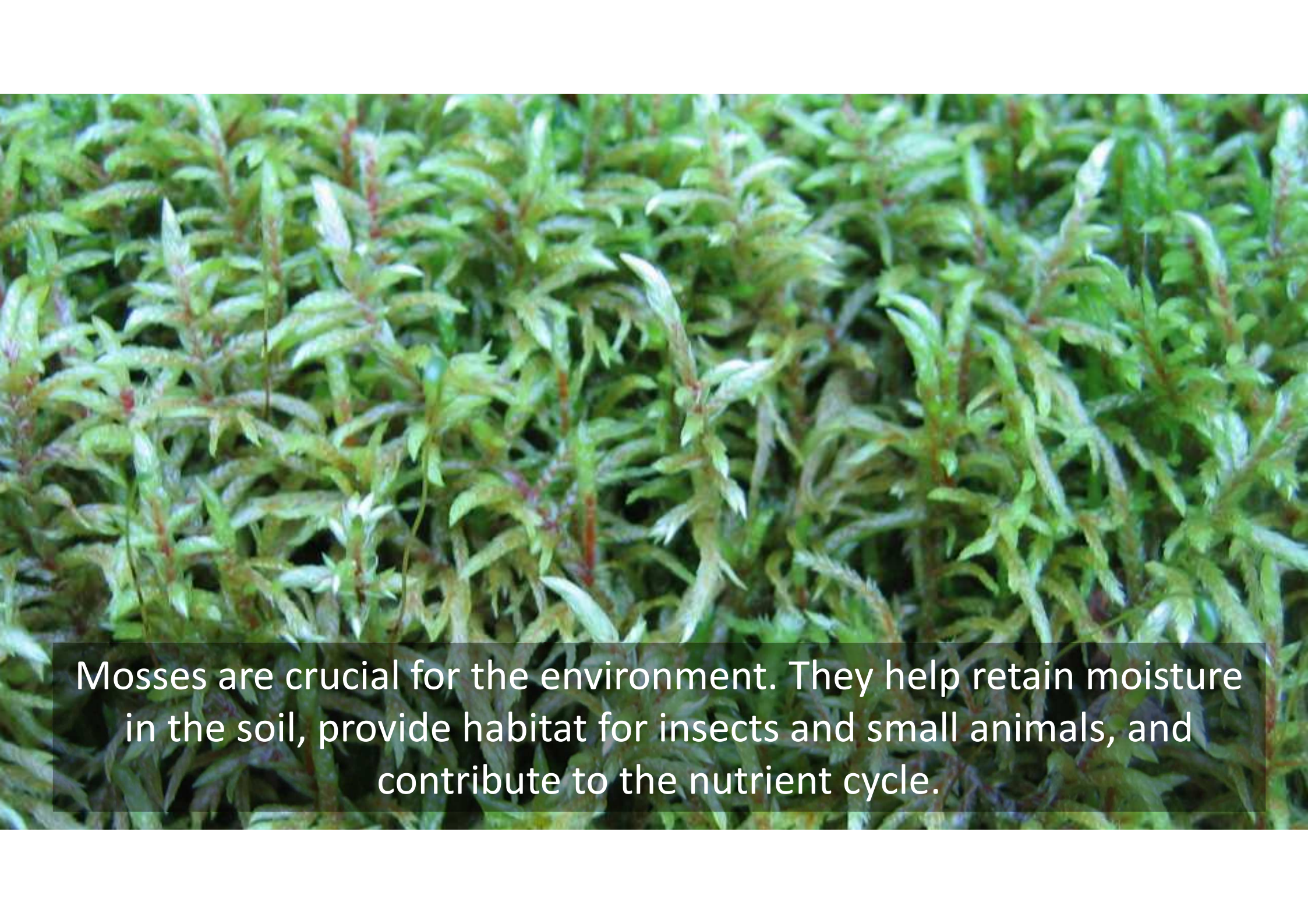


Mosses have simple structures. They consist of tiny leaf-like structures called phyllids, stems that hold them up, and rhizoids that anchor them to surfaces.

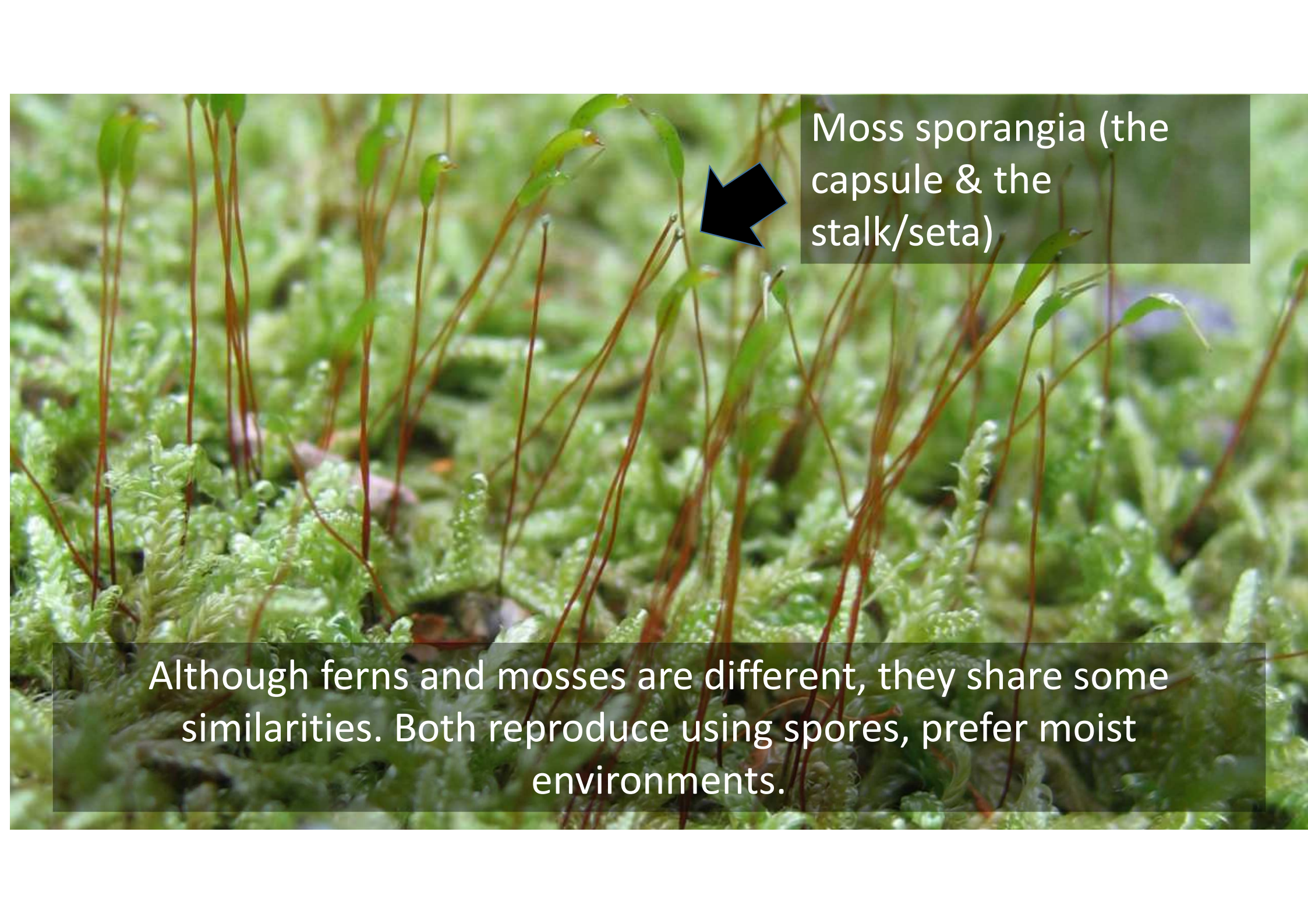
Mature Gametophytes



The life cycle of mosses




Mosses are crucial for the environment. They help retain moisture in the soil, provide habitat for insects and small animals, and contribute to the nutrient cycle.



Moss sporangia (the capsule & the stalk/seta)

Although ferns and mosses are different, they share some similarities. Both reproduce using spores, prefer moist environments.

A close-up photograph of a fern frond. The main part of the frond is a large, unfurling leaf with many small, rounded leaflets. It has a dark, almost black, fuzzy texture on its underside. A smaller, tightly coiled fiddlehead is visible in the center of the frond, showing the same fuzzy texture. The background is a blurred green field with some yellow flowers.

Despite their similarities, ferns and mosses have distinct characteristics. Ferns have true leaves and stems, while mosses lack these structures.