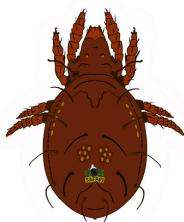




The microscopic Big Five at 40x

These five multicellular organisms are commonly found in moss. Images are not to scale.

This is a starting point. For genus and species, specialised keys are required.



Oribatid Mites (Phylum: Arthropoda)

Look for:

Length range:
400 µm - 1.0 mm

- A dark pear-shaped body and head
- 8 legs with hooks on the end
- Long and short hairs arranged on the body and legs
- Exoskeleton is brown, orange or red in colour



Nematodes (Phylum: Nematoda)

Length range:
400 µm - 1.0 mm

Look for:

- A long worm
- Pointed head end, tapered tail
- Mouth, pharynx, digestive system can be visible within the body
- Darker oval eggs may be seen in adults

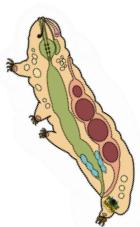


Rotifers (Phylum: Rotifera)

Length range:
400 µm - 600 µm

Look for:

- A crawling worm-shape, sometimes contracted into a ball
- Sometimes two ciliated 'wheel organs' open
- Body is in pseudo-segments, with two toes at the end
- Body often has a pink or red colouration

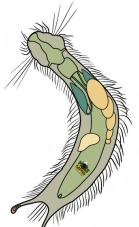


Tardigrades (Phylum: Tardigrada)

Length range:
400 µm - 800 µm

Look for:

- A soft, four segmented body
- 4 pairs of short legs with claws
- A pointed mouth, buccal pharyngeal apparatus visible inside
- Some types are red and ornamented



Gastrotrichs (Phylum: Gastrotricha)

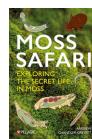
Length range:
200 µm - 400 µm

Look for:

- A flat worm covered in cilia
- A distinctive forked tail
- Fast and darting when swimming
- Cilia are longer around mouth and head

Images from:

A.Chandler-Grevatt (2025) *Moss Safari. Exploring the secret life in moss.* Pelagic Publishing



Find out more at www.mosssafari.com



© 2025 A. Chandler-Grevatt / Moss Safari. This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0). Schools, universities, and educators are welcome to use, copy, and adapt this content for teaching and learning acknowledging the original source. Commercial reproduction or distribution is not permitted without permission. More information: www.mosssafari.com. Gastrotrich photo credit: David McCamey



Connect with nature



Promote microscopy



Inspire STEM