What is a Mushroom?

A mushroom is the fruiting body of a fungus. Unlike a plant, a fungus cannot produce its own food and must obtain its nutrition from other sources. The most spectacular of these fruiting bodies are the mushrooms you see growing throughout Alberta.

Fungi perform essential roles in all ecosystems. They decompose dead organic matter, are symbiotic partners for most plants or parasitize living plants.

• If not for decomposer fungi, the earth would be covered in vast amounts of plant and animal remains!

• As symbiotic partners (mycorrhizas), the fungus' belowground system of fine threads, called mycelium, envelops and grows into the roots of plants, supplying them with needed nutrients and water. The plant, in turn, supplies the fungus with sugars that the plant has produced by photosynthesis.

• Certain fungi are parasites, which exist by attack living or damaged plants.

Mycology - the Study of Fungi

Fungi form their own Kingdom and are more closely related to animals than to plants.

There are about 85,000 described species, but there may be as many as 1.5 million different fungi on earth. Fungi are identified on the basis of many characteristics. Often the differences are minute but important.

Edmonton Mycological Society

The Edmonton Mycological Society is a non-profit organization whose members are dedicated to learning more about fungi. Fungi have many uses, including food, medicine, and art. For more information on the Edmonton Mycological Society, please visit our website at

www.wildmushrooms.ws

Acknowledgements

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Photo courtesy of Martin Osis.

A Provincial Mushroom

Leccinum boreale

Leccinum boreale

lĕk-sĭ-nŭm bor-ē-ăl-ē

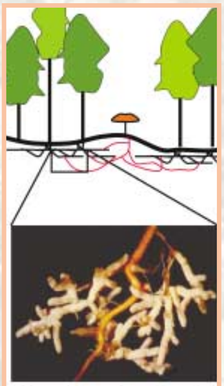
The 'Red Cap' or 'Northern Roughstem' Mushroom

This fungus is a common inhabitant of forests in Alberta. It is a delicious edible summer mushroom and has been picked in Alberta for generations, particularly by those with European ancestry.

While many mushrooms produce spores on bladelike gills, *Leccinum boreale* grows its spores in spongy pores below an orange to reddish cap.

Its stem is whitish and covered with ornamentation, called scabers, that darken with age. The solid white flesh slowly turns pink, then grey, when cut.

Leccinum boreale grows almost exclusively under poplars but mostly beneath trembling aspen (*Populus tremuloides*). It has a mutually beneficial mycorrhizal relationship with these trees. The tree uses the extensive mushroom network of "root-like" mycelium to obtain much-needed nutrients for growth.



Mycorrhizas – fungal mantle (whitish) covering an aspen root (orange-brown).

Over 90% of plants have some type of mycorrhizal fungus. Plants would have difficulty flourishing, or even surviving, without their fungal partners.

A Provincial Mushroom Emblem for Alberta

Leccinum boreale is widely distributed across Alberta, edible, easily identified, and has a significant history of human use. The Edmonton Mycological Society linked with over 2,500 voters across the province during the "Pick a *Wild* Mushroom, Alberta!" campaign to propose that *Leccinum boreale* joins Alberta's provincial emblems.