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*Festuca edlundiae* (Susan Laurie Bourque)

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**Wagner, David H.:**

*Botrychium ascendens*

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## Glossary

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- Achene:** small, dry, single-seeded indehiscent fruit.
- Adventitious:** developing in an unusual position, such as roots originating along the stem.
- Alternate:** attached singly at each node with consecutive structures, usually leaves, pointing in different directions.
- Amphi-Beringian:** found on both sides of the Bering Strait, usually including Russian Far East and a combination of Alaska, Yukon, and Northwest Territories.
- Androgynous:** having staminate flowers above the pistillate flowers in the same spike.
- Annual:** one year life cycle, growing from seed, reproducing, and dying in one year.
- Anthesis:** time of flowering when flowers are fully expanded.
- Anther:** pollen-bearing portion of stamen.
- Apex:** (*pl. apices, apices*) tip, usually in relation to a leaf.
- Apomictic:** any form of asexual reproduction, usually referring (as it does in this guide) to seed production without fertilization.
- Appressed:** Closely pressed against a surface.
- Ascending:** angled upward.
- Auricle:** ear-shaped lobe or appendage.
- Awn:** slender, bristle-shaped appendage; present on the spikelets of many grasses.
- Axil:** Point at which the leaf joins the stem.
- Axillary:** arising from the joint between a leaf and the stem.
- Basal:** related to or located at the base.
- Beak:** prolonged, slender tip of a thicker structure, usually in reference to fruits or perigynia.
- Biennial:** two year life cycle, usually growing from seed in the first year and reproducing in the second year.
- Bract:** small leaves at the base of an inflorescence or flower.
- Bulb:** short, vertical, thickened underground shoot surrounded by thickened leaves or leaf bases.
- Bulbil:** small, bulb-like reproductive structure often arising from axils of leaves or in place of flowers.
- Caespitose:** growing in tufts or clumps.
- Calcareous:** comprised in part of calcium, referring to minerals such as limestone and dolostone which contain calcium and carbonate (CO<sub>3</sub>) and are basic.
- Calyx:** (*pl. calyxes, calyces*) the outer whorl of flowering parts; collective term for all the sepals of a flower.
- Campanulate:** bell-shaped.
- Canescent:** covered with short, fine white or grey hairs.
- Capitate:** aggregated into a compact cluster, forming a head.
- Capsule:** a dry fruit of more than one carpel that opens at maturity to release seed.
- Carpel:** a fertile leaf bearing undeveloped seeds, one or more carpels form a pistil.
- Caudex:** (*pl. caudexes, caudices*) the persistent, thickened base of a perennial plant.
- Cauline:** pertaining to or on the stem.
- Ciliate:** fringed with long, simple hairs.
- Circumboreal:** occurring in the boreal zone throughout or through much of the northern hemisphere.
- Circumpolar:** occurring in the arctic zone throughout or through much of the northern hemisphere.

## Glossary

- Clasping:** partially surrounding, usually in reference to leaf bases partially surrounding the stem.
- Cordate:** heart-shaped, usually referring to a leaf.
- Cordillera:** collective term for the mountains of western North America that generally run parallel to the Pacific Coast from Alaska to Mexico.
- Corm:** short, solid, thickened, vertical, underground stem.
- Corolla:** the inner whorl of flowering parts; collective term for all the petals of a flower.
- Corymb:** flat-topped cluster of flowers, the individual flower stalks grow upward from various points on the axis of the inflorescence so that all flowers reach the same approximate height.
- Cruciform:** cross-shaped.
- Culm:** the stem of graminoid plants.
- Cuneate:** wedge-shaped, tapering to a point.
- Cyme:** flat-topped or convex cluster of flowers in which the innermost and/or uppermost flowers open first.
- Decumbent:** lying on the ground with upper sections ascending upward.
- Deltate:** shaped like an equilateral triangle, usually referring to leaf.
- Dioecious:** Producing male and female flowers on separate individuals.
- Dilated:** expanded or widened.
- Disjunct:** geographically separated from the main range of the taxon.
- Disk flower:** flower with a tubular corolla found in the flower heads of Asteraceae.
- Distylous:** having two floral forms, one with short styles and long stamens and the other with long styles and short stamens.
- Edaphic:** relating to conditions of the soil.
- Endemic:** growing in only a limited and narrow geographic area.
- Entire:** without indentations or division, often referring to the margin of a leaf or a petal.
- Filiform:** thread-like.
- Flag leaf:** in reference to grasses, the upper most leaf on the stem.
- Floret:** small flower, usually in a cluster; most often applied to the small, specialized flowers of Poaceae and Asteraceae.
- Flower head:** dense cluster of florets surrounded by a whorl of bracts so that it appears as a single flower.
- Fronde:** the leaf of a fern.
- Fruit:** the seed-bearing mature ovary and associated structures of a plant.
- Gametophyte:** the sexually reproducing (as opposed to spore producing) individuals of ferns and fern allies.
- Gemma:** (*pl. gemmae*) bud-like structure that separates from the parent plant and forms a new individual.
- Glabrous:** without hairs.
- Glaucous:** covered with a white, waxy layer.
- Glandular:** with secreting organs (glands), which can be stalked (on the summit of hairs) or sessile.
- Globose:** sphere-shaped.
- Glume:** one of the pair of bracts at the base of a spikelet in Poaceae.
- Homostylous:** having flowers of one form, all styles are the same length.
- Hyaline:** translucent.
- Hypha:** (*pl. hyphae*) multicellular, thread-like structures that comprise the primary body of a fungi.
- Hypogynous:** with flower parts (sepals, petals, stamens) attached to the receptacle below the pistil.
- Imbricate:** overlapping, like shingles on a roof.
- Indehiscent:** not splitting open at maturity.
- Indusium:** (*pl. indusia*) an outgrowth of the fern frond surface that covers or contains the sori.



- Inflorescence:** a flower cluster or arrangement of flowers on a stem.
- Internode:** the portion of a stem between two nodes.
- Invasive plant:** non-native plant that produces viable offspring in large numbers and has the potential to establish and spread in natural areas.
- Involucre:** one or more whorls of small leaves or bracts subtending an inflorescence, such as a flower head (Asteraceae).
- Keel:** a conspicuous, length-wise ridge.
- Lanate:** woolly, with long entangled hairs.
- Lanceolate:** lance-shaped, much longer than broad, widest below the middle and tapering to both ends.
- Leaflet:** leaf-like division of a single compound leaf.
- Lemma:** the lower of the two bracts enclosing a floret in Poaceae.
- Ligule:** the flat, membranous, upward outgrowth from the top of a sheath where a grass leaf separates from the stem.
- Linear:** long and narrow, the sides parallel or nearly so.
- Lip:** a projection of a structure, such as the lower petal of an orchid flower.
- Loam:** soil consisting of a mixture of sand, silt, clay, and organic matter.
- Lobe:** a rounded division of a leaf or other structure.
- Lunate:** crescent shaped.
- Mafic:** comprised of silicate minerals that are rich in iron and magnesium and are basic.
- Monoecious:** producing male and female reproductive structures in separate flowers on the same individual.
- Mycorrhiza:** (*pl. mycorrhizae*) symbiotic association of fungal hyphae with plant roots.
- Nerve:** simple vein or rib of a leaf or fruit.
- Node:** part of the stem where branches or leaves originate.
- Non-native:** plants that are present in a given area because of their accidental or intentional introduction by human activities.
- Obcordate:** inversely heart-shaped; attached at the narrower end and notched at the apex.
- Oblanceolate:** inversely lance-shaped; the structure is widest above the middle and tapers in both directions.
- Obovate:** inversely egg-shaped; structure is widest above the middle.
- Opposite:** attached doubly at each node with structures facing in opposing directions.
- Orbicular:** spherical or circular in outline.
- Ovary:** the expanded basal portion of a pistil containing the undeveloped seeds.
- Ovate:** egg-shaped, structure is widest below the middle.
- Ovoid:** three-dimensionally egg-shaped.
- Palea:** the upper of the two bracts enclosing a floret in Poaceae.
- Palmate:** divided into three or more lobes or leaflets diverging from a common point, like fingers from a palm.
- Panicle:** A flower cluster where the main axis branches into several lateral axes from which multiple flowers arise.
- Papillose:** having miniature bump-like projections.
- Pappus:** (*pl. pappi*) awns, scales, or bristles at the apex of the achenes of Asteraceae.
- Pedicel:** stalk of a single flower or fruit in an inflorescence.
- Peduncle:** stalk of a cluster of flowers or of a single flower when it alone is the entire inflorescence.
- Peltate:** with stalk attached in the center of the lower surface.
- Perennial:** multi-year life cycle, usually producing flowers and fruit each year once the individual has reached maturity.

## Glossary

- Perigynium:** (*pl. perigynia*) inflated tissue that encloses the pistil, and later the achene, in *Carex* species.
- Persistent:** remaining attached when dead or no longer functional.
- Petal:** one of the specialized inner flower leaves.
- Petiolated:** having a petiole, referring to the attachment of leaves.
- Petiole:** leaf stalk.
- Phyllary:** bract of the involucre of the composite flower.
- Pilose:** covered with soft, fine hairs.
- Pinna:** (*pl. pinnae*) used here for the primary division of a compound fern frond.
- Pinnate:** with leaflets or pinnae arranged on either side of a common axis.
- Pinnately:** lobes or divisions separated by deep indentations along a common axis and having therefore the appearance of a pinnately compound leaf.
- Pinnatifid:** lobe divisions reaching only halfway to the midrib of the leaf.
- Pinnatisect:** pinnately cleft at midrib.
- Pistil:** female organ of a flower including the stigma, style, and ovary.
- Pod:** dry fruit that opens at maturity to release seeds.
- Pistillate:** female, having one or more pistils but no stamens.
- Prostrate:** lying flat upon the ground.
- Puberulent:** covered with fine, very short, soft hairs.
- Pubescent:** covered with hairs.
- Pustulate:** having raised, blister-like areas.
- Pyriform:** pear-shaped.
- Raceme:** unbranched cluster of stalked flowers arising from a central stalk where the flowers at the bottom open first.
- Ray flower:** flower with a flattened, strap-shaped corolla found in the flower heads of Asteraceae.
- Receptacle:** the end of a stem to which a flower is attached.
- Recurved:** curving backwards.
- Reflexed:** abruptly bent downwards.
- Rhizomatous:** having rhizomes.
- Rhizome:** underground stem, distinguished from a root by the presence of nodes, buds, or scale-like leaves.
- Rosette:** cluster of leaves arising from a central point.
- Runner:** a horizontally spreading stem on the ground, usually rooting at nodes.
- Scale:** small, thin structure.
- Scape:** a leafless flower or inflorescence stalk arising from ground level.
- Scapose:** having flowers that are borne by a leafless stalk arising from ground level.
- Scarios:** thin, dry, membranous, not green.
- Scree:** unconsolidated angular rocks of small size, smaller than fist-sized.
- Secund:** arranged on one side of an axis, such as a stem.
- Sepal:** one of the specialized outer flower leaves.
- Serrulate:** having minute, short, sharp, forward-pointing teeth.
- Sessile:** without a stalk.
- Setose:** covered with bristles.
- Sheath:** structure that partially or completely surrounds another structure, usually referring to the portion of a grass leaf that surrounds the stem.
- Silicle:** dry, dehiscent seed pod, less than twice as long as wide, characteristic of Brassicaceae.
- Silique:** dry, dehiscent seed pod, more than twice as long as wide, characteristic of Brassicaceae.
- Sorus:** (*pl. sori*) cluster of sporangia in ferns.
- Spatulate:** spatula-shaped, rounded at tip and tapering toward the base.

- Spike:** unbranched cluster of unstalked flowers arising from a central stalk.
- Spikelet:** a small, clustered unit of florets in the inflorescences of Poaceae.
- Sporangium:** (*pl. sporangia*) spore-bearing structure.
- Sporophyte:** the spore producing (as opposed to sexually reproducing) individuals of ferns and fern allies.
- Stamen:** the male part of the flower that bears pollen, consists of an anther and the supporting filament.
- Staminate:** male, having one or more stamens but no pistils.
- Stellate:** star-shaped.
- Stipe:** referring here to the stalk of a fern frond.
- Stipule:** a leaf-like appendage at the base of a leaf stalk.
- Stolon:** an elongated horizontal stem running along the ground that bears roots at nodules, forming new plants.
- Stoloniferous:** having stolons.
- Style:** thin, often attenuated portion of the pistil occurring between the stigma and ovary.
- Subcapitate:** nearly head-shaped.
- Subterete:** almost round or cylindrical.
- Succession:** the process of change in plant communities over time.
- T-shaped:** 2-rayed with rays forming a roughly straight line bisected by the stalk.
- Talus:** unconsolidated angular rocks of large size, fist-sized and larger.
- Taproot:** a primary descending root.
- Terete:** cylindrical, therefore round in cross-section, and often tapering at both ends.
- Ternate:** divided into three parts.
- Terrace:** relatively flat surface cut into the side of a steep slope.
- Till:** unsorted sediments of glacial origin, including sand, silt, clay, gravel, rubble, and boulders.
- Tomentose:** covered with matted, soft, wool-like hairs.
- Tube:** the united portion of a corolla in which the petals are fused to one another.
- Tuberculate:** with wart-like thickenings or knobby projections.
- Tufted:** in a dense cluster.
- Tussock:** compact mound formed by tightly growing clump of graminoid plant.
- Ultramafic:** comprised of minerals with low silicate content that have very high iron and magnesium content and are basic.
- Umbel:** flat-topped cluster of flowers or flower clusters in which pedicels and peduncles arise from a common point.
- Valve:** a seed containing compartment of pod or capsule.
- Villous:** covered with long, soft, shaggy hairs, not matted.

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## References

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References are organized by the order of their appearance. The nomenclature in this guide primarily follows the Panarctic Flora Checklist (<http://nhm2.uio.no/paf/>). When species treatments were unavailable from Panarctic Flora Checklist, priority was given to names accepted by the Flora of North America publications. Several taxa did not have treatments in either of the aforementioned sources, and for those taxa the nomenclature in this guide followed a variety of sources, including ITIS ([www.itis.gov](http://www.itis.gov)) and The Illustrated Flora of British Columbia.

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## Index of Common Names

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Common names are not included in the species accounts because they are often nonsensical and little relate to the plant. Sometimes common names are more or less a translation of the scientific name, but more often they are arbitrary. An index of common names is provided here to increase clarity when common names are used. However, common names can be misleading and sometimes refer to more than one taxon. Several of the taxa in this field guide have no common name and the corresponding pages do not appear in the index below.

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