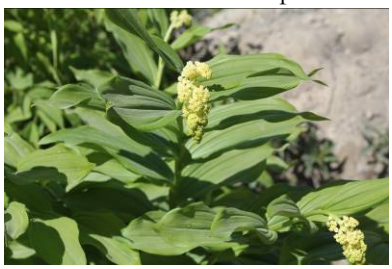
CHAPTER 14

MONOCOTS

Feathery false-lily-of-the-valley

Maianthemum (Smilacina) racemosum • Liliaceae

This rhizomatous herbaceous perennial occurs throughout most of North America in dense woods and open forests up to montane habitats. This facultative species rarely occurs in dry forests or meadows. On Mount St. Helens, it is restricted to tephra impacted forests, moist forests on the south side of the cone, blown-down forests and refugia. Plants are slightly hairy flowering stems, erect or leaning over, reaching 50-70 cm. Leaves are alternate along stem, generally oblong, with a pointed tip, 8-18 cm long; 4-8 cm wide. Flowers clustered in a many-flowered raceme about 10 cm long; 6 cream-white tepals are 1.5 mm long. Fruits are showy red berries about 6 mm wide. Dispersal is local, by birds, perhaps rodents.



Green false hellebore

Veratrum viride • Liliaceae

This tall rhizomatous perennial is found from Alaska to California and in much North America, mainly in moist to wet meadows, at all forested elevations. It is a facultative wetland species. On Mount St. Helens, it occurred mainly in open, moist forests of the tephra fall zone and some relict sites. Stems are up to 1.5 m tall, leafy and hirsute. Leaves are large (15-30 cm long), alternate, oblong; they have prominent parallel veins. The influence is a loose, open, terminal panicle about 50 cm long, formed of many tiny pale green flowers with 6 tepals. Capsules are 2-3 cm long; they open to release flat, winged seeds adept at wind dispersal.

Common beargrass

Xerophyllum tenax • Melanthiaceae

This rhizomatous evergreen perennial herb, closely related to the lily family, occurs from British Columbia south to California and east through the Rockies. It occupies open, relatively dry forests and dense, moist forests. Around Mount St. Helens, it is found in fir forests, both in the tephra fall zone and south of the crater. It thrives in some blown-down forest sites, and occurs on some lahars and in the pyroclastic zone. There is an interesting population growing in the lava flow at Red Rock Pass. The leaves resemble those of grasses or sedges. They are very long, wiry, distinctly graminoid in appearance, up to 50 cm in length, only 1-4 mm broad. The inflorescence is terminal raceme up to 50 cm long on a stalk; with the stalk, it may exceed 1 m in length. 6 tepals are 6-8 mm long, cream colored. Capsules are 5-7 mm long, releasing seeds to tumble along the ground.

Summer coralroot

Corallorhiza mertensiana • Orchidaceae

This lovely perennial saprophytic orchid generally displays a single flowering shoot and is widespread in the western states, usually in moist conifer forests with thick litter at low to mid-elevation. On Mount St. Helens, it is found in refugia and in old-growth forests, particularly on the south side of the mountain. Stems can reach 40 cm in height; pigments are purple to red-brown; leaves lacking or reduced to narrow bracts. Flowers plentiful in a raceme; sepals 3, pink to yellow, 9 mm long; petals 3, 2 similar to sepals, the third forming a dangling lip that is red and lacks spots. The capsule is dehiscent, with small wind-dispersed seeds.

GRAMINOIDS

Merten's sedge

Carex mertensii • Cyperaceae

This sedge is common throughout the Pacific Northwest, extending to Alaska and to California. It is found in moist to wet meadows in montane and subalpine regions. It is a facultative wetland plant, but on Mount St. Helens, it does not occur in wetlands. It is common in meadows of the blown-down zone, on lahars and in barren sites of the tree removal zone. It forms large clumps of leaves up to 80 in height; leaves narrow, 5 mm wide; inflorescence is terminal cluster, with male flowers beneath female flowers, coming off at the side to form a chubby, crowded, drooping mass. Achenes enclosed by a sac (perigynium) that is white, membranous and flattened to simulate wings. Dispersal is by wind, mostly by tumbling.

Small-winged sedge

Carex microptera • Cyperaceae

This perennial sedge is found throughout western North America often in moist meadows. It is a facultative species. On Mount St. Helens, it grows with other sedges on most primary surfaces, particularly on pumice and pyroclastic areas. Plants develop to form dense, erect clumps up to 30 cm tall. Leaves narrow (5 mm), light green in color. Inflorescence formed by dense cluster of tightly packed brown spikes (2 cm wide); achene less than 5 mm wide, with marginal wings. Dispersal is by wind as the fruit tumbles along the ground.

Thick-headed sedge

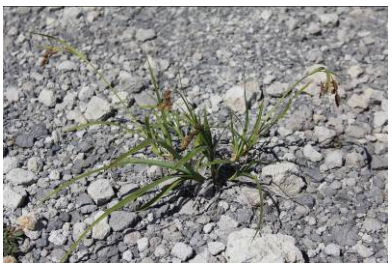
Carex pachystachya • Cyperaceae

This distinctive sedge is common throughout western North America, primarily in open, drier meadows. The dense tuft of stems develops from a short rhizome. It occurs in all habitats except wetlands, but favors drier sites. On Mount St. Helens this facultative species occupies open habitats of the tree removal zone and lahars. Leaves are flattened, shorter than the stem. Flower heads are terminal, densely packed with male and female flowers, forming a fat inflorescence, which is distinctive. Seeds are copper to brown colored, about 4 mm long, with marginal wings. Dispersal is by wind, tumbling along the surface. Similar species include small-winged sedge, with which it is easily confused in the absence of flowers, and dunhead sedge, which is smaller and has a nodding inflorescence.

Dunhead sedge

Carex phaeocephala • Cyperaceae

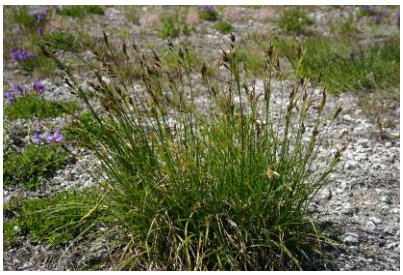
This perennial sedge is widespread in North America, but uncommon in southwestern Washington; it is typically an alpine species, yet does well in montane meadows. It is a facultative upland species that on Mount St. Helens sometimes occurs in tephra impacted meadows of the south side and in blown-down forests; it is more common in barren sites of the tree removal zone. It forms clumps of stems with narrow leaves that together rise up to 40 cm tall. The inflorescence is composed of nodding brown clusters of flowers (unique on Mount St. Helens) that may be tinged green to brown on the female flowers. The perigynium covering is nearly black with a green margin. Achenes are released when fruit dehisces, and are then free to tumble at the whim of wind, water and gravity.



Payson's sedge

Carex paysonis • Cyperaceae

This robust perennial sedge is found scattered in the Rocky Mountains and north to Alaska at high elevations; it is frequent in the Cascades Range. It is a facultative upland species, but on Mount St. Helens it prefers moist habitats to dry ones; its distribution is typically at elevations lower than its normal. It is found in open tephra sites and throughout the tree-removal zone, but it is never common. Once observed, it perseveres; it occurs in all habitats except wetlands. Leave are basal, narrow, and bunched into a tight bunch growing up to 40 cm tall. The inflorescence is an elongated, erect spike. The perigynium is black and roundish, containing small achenes dispersed by wind.



Ross' sedge

Carex rossii • Cyperaceae

This small rhizomatous perennial sedge grows in dense tufts of often-sterile stems. It is common in the Great Lakes region and throughout western North America. Typically it occurs in drier open forests and meadows in the mid-elevations. On Mount St. Helens, it was common in recovering tephra-impacted meadows, occasionally on lahars and scattered on dry pumice and other tree removal zone habitats. Leaves are narrow, tending to nod, and spreading from the stem. Inflorescence formed by terminal spikes plus spikes on lateral stalks. Achenes are 3 mm wide and covered with hairs. Achenes are dispersed as tumblers, primarily by wind.

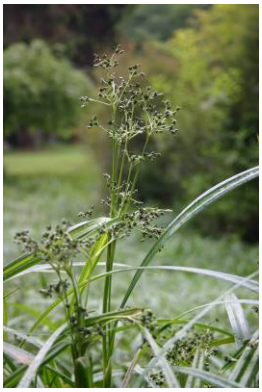
Showy sedge

Carex spectabilis • Cyperaceae

This large, showy plant is a tufted rhizomatous perennial that occurs from Alaska to northern California in wet meadow in montane and, especially, subalpine habitats. It is a facultative wetland plant, which on Mount St. Helens often occurs in moist meadows and late snow melt habitats. It also occurs in refugia, moist pumice, lahars and wetlands. Culms reach 40 cm, leaves are narrow (2-4 mm wide). Inflorescences are individual, elongate spikes up to 2 cm long, usually drooping. Flowers are brown to black, lanceolate, pointed at tip. Seeds are dispersed by tumbling and by water.

Panicled bulrush

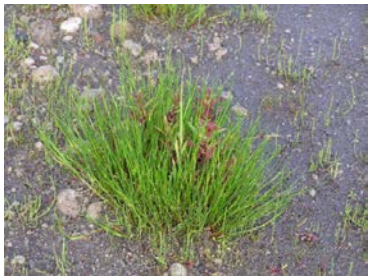
Scirpus microcarpus • Cyperaceae



This is an herbaceous rhizomatous perennial found throughout southern Canada and the northern U.S. It occupies wet meadows from sea level to montane habitats. It is an obligated wetland plant that occurs only in wetlands on Mount St. Helens. Stem cross-sections are triangular; plant reaches over 1 m in height. Leaf blades similar to grasses, 1-1.5 cm wide, very long; purple-red sheaths. Inflorescence is very open with many sessile spikelets. Fruits are lens-shaped achenes about 1 mm long. Other common wetland bulrushes include **hard stem bulrush** (*S. acutus*) and **chair maker's bulrush** (*S. americanus*). Dispersal is by water.

Toad rush

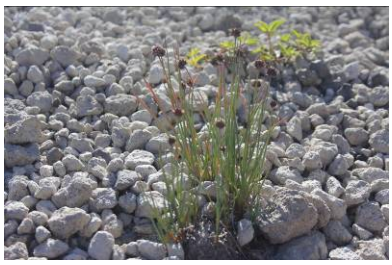
Juncus bufonius • Juncaceae



This weedy, introduced annual is common in disturbed wetlands from the coast to mid-elevations throughout the temperate and boreal world. It is a facultative wetland species that on Mount St. Helens is scatted in wetlands and in wet parts of the pyroclastic zone. This small plant rarely reaches 20 cm tall, and is characterized by basal flowers. Leaves are alternate, up to 10 cm long, only 1 mm wide, with membranous margins; tend to curl to form tube. Flowers 5 mm long, usually solitary in leaf nodes; the capsules are nearly globe-shaped, 3 mm long. Other rushes common in wetlands on Mount St. Helens include the **tape tip rush** (*J. acuminatus*), **mountain rush** (*J. articulates*) and **Drummond's rush** (*J. drummondii*). Dispersal of all these species is by wind, tumbling and by water.

Merten's rush

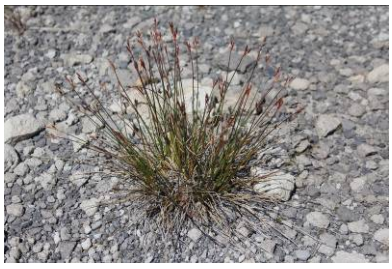
Juncus mertensianus • Juncaceae



This large, rhizomatous tufted perennial occurs throughout western North America in montane and subalpine habitats, usually in wet habitats. Oddly, this species is designated as an obligate wetland species, but in the barren habitats of Mount St. Helens, it rarely occurs in wetlands. Rather, it occurs in seasonally moist sites in the blown-down zone and throughout the tree removal zone. It is occasionally abundant. Leaves are rounded in cross section, up to 20 cm in length. Flowers bunched into a dark, terminal, ovoid cluster about 2 cm wide; flower parts dark brown, narrow and lance-shaped. Capsules are egg-shaped; seeds are tiny. Capsules dehisce and seeds are dispersed by tumbling across a surface.

Parry's rush

Juncus parryi • Juncaceae



This dense, erect, clumped perennial occurs throughout western North America, mainly in moist sites at high elevations. It is a facultative wetland species with broad moisture tolerances. On Mount St. Helens, it is locally abundant on barren sites of the tree removal zone and common on lahars and tephra deposits on the south side of the cone. The plant forms dense clumps of stiff, erect basal leaves with sharp tips; up to 30 cm tall. Leaves are dark green to black and pointed. The inflorescence is attached laterally below the tip; the few flowers enclosed by brown bracts. Capsules release many small seeds with membranes attached. Dispersal is by wind and sometimes water.

Small-flowered woodrush

Luzula parviflora • Juncaceae

This rhizomatous grass-like perennial occurs throughout Canada, in the adjoining eastern states and throughout the western U.S. It occupies moist meadows and drier disturbed habitats up to the high subalpine zone. It is a facultative species. On Mount St. Helens, it occurs in all meadow habitats of the tree removal zone and in open wetlands. Plant can be 40 cm tall, but appears "lazy" not erect. There are several basal leave; those on stem are 5-10 mm wide. Inflorescence is open and nodding, up to 15 cm long; flowers are isolated and appear dark brown to purple. Fruits are a brown capsule with several tiny brown to yellow seeds that have a ridge. These seeds can glide for short distances.