

Carex stipata Muhl.; Willd. Sp. Pl. iv, 233 (1805).

Wet places, valley of Big Potlatch River, Nez Perces County; June 9 (No. 359). Valley of the Cœur d'Alene River, Kootenai County; July 13 (No. 638).

Carex straminea festucacea (Willd.) Tuckerm. Enum. Meth. 18 (1843); *C. festucacea* Willd. Sp. Pl. iv, 242 (1805).

Rocky banks of the Clearwater River, Nez Perces County; June 2 (No. 295). Common in meadows, valley of Big Potlatch River, Nez Perces County; June 9 (No. 367).

Carex tenella Schk. Riedgr. 23, f. 104 (1801).

Meadows, Granite Station, Kootenai County; July 30 (No. 798).

Carex teretiuscula ampla Bailey, Mem. Torr. Club, i, 53 (1889).

Wet places at the North Fork of Hangman's Creek, Indian reservation, Latah County; July 1 (No. 528).

Carex utriculata minor Boott; Hook. Fl. Bor. Amer. ii, 221 (1839).

Wet places at Granite Station, Kootenai County; July 29 (No. 788).

GRAMINEÆ.

By L. H. DEWEY.

The grasses obtained on this expedition, amounting to 120 numbers, form a most important part of the collection from an economic standpoint. The vegetable resources of that region for some time to come will consist chiefly in the native forests for the production of lumber, and in the native pastures for the production of beef and mutton. The collectors' notes indicate that many of the mountain meadows, the lake shores, and the alluvial deposits along the river bottoms abound in grasses mostly unlike those found east of the Mississippi River, but many of them evidently just as valuable for grazing, and certainly better adapted to that region than any which are cultivated in the East. A careful and considerate use of these grazing lands will permit them to continue productive and valuable for many years, while a single season of overstocking is likely to ruin them for all time, as the more valuable varieties are always killed out first, and their places are usually taken by less valuable annual plants or by weeds that are positively injurious. Some of the grasses collected are certainly worthy of trial in cultivation, and may form valuable additions to our cultivated grasses. At least half a dozen varieties even in their wild state are as valuable as many of the grasses introduced from Europe that have been developed by long cultivation.

An exact knowledge of the economic values of grasses must be based to some extent upon a technical knowledge of their systematic relationships and their morphological characters. This collection is no less valuable as an aid to our knowledge in these lines. It is the first collection of real importance that has been made in exactly this region. Nuttall, Hooker, Howell, Suksdorf, and others have collected on the Columbia River and west of the Cascade Mountains, while Scribner, Tweedy, and Williams have worked over a large part of Montana; but the region just west of the Bitter Root Mountains was almost unknown

to the agrostologist, as well as to other botanists. The grasses composing this collection are in exceptionally good condition for systematic work, and in many instances the series of varying forms seems to be well represented, so that the specimens will certainly prove valuable for future study.

Panicum capillare minus Muhl. Gram. Deser. 124 (1817).

Damp places near Rathdrum, Kootenai County; July 25 (No. 713).

Panicum pubescens Lam. Encycl. iv, 748 (1797).

Shores at Farmington Landing, Lake Cœur d'Alene; July 11 (No. 616). Sandy soil, valley of Cœur d'Alene River, Kootenai County; July 13 (No. 643). Hope, shore of Lake Pend d'Oreille; August 24 (No. 948).

All of the forms represented by these numbers have heretofore been referred to the ambiguous species, *Panicum dichotomum* L.

Panicum scoparium Lam. Encycl. iv, 744 (1797).

Frequent on sandy soil, valley of Clearwater River, Nez Perces County; June 2 (No. 296).

Phalaris arundinacea L. Sp. Pl. i, 55 (1753).

Alluvial soil, Farmington Landing, Lake Cœur d'Alene, July 5 (No. 563).

Aristida fasciculata fendleriana (Steud.) Vasey, Contr. Nat. Herb. ii, 515 (1894).

River banks, Spokane Bridge, 18 miles east of Spokane, Washington; August 16 (No. 906).

This is one of the forms of the variable *Aristida fasciculata* Torr. (*A. purpurea* Nutt.) and approaches most nearly to the variety *fendleriana*; but the range of that variety, as known heretofore, does not extend north of Colorado and Utah.

Stipa comata Trin. & Rupr. Mem. Acad. St. Pet. ser. 6, v, 75 (1849).

Sandy soil, scarce, valley of Clearwater River, Nez Perces County; June 2 (No. 293).

Stipa viridula Trin. Bull. Sci. Acad. St. Pet. i, 67 (1836).

Sandy soil on Hellgate River, Bonner, Missoula County, Montana; August 30 (No. 986).

Alopecurus californicus Vasey, Bull. Torr. Club xv, 13 (1888).

Wet meadows, head of Little Potlatch River, Latah County; June 16 (Nos. 396, 415).

This robust, leafy grass is apparently as promising for cultivation in moist meadows as the European foxtail, *Alopecurus pratensis*, from which it differs chiefly in its looser spikes with smaller spikelets.

Alopecurus geniculatus fulvus (Smith) Scribn. Mem. Torr. Club, v, 38 (1894); *A. fulvus* Smith, Engl. Bot. t. 1467 (1793); *A. geniculatus aristulatus* (Mx.) Torr. Fl. U. S. i, 97 (1824); *A. aristulatus* Mx. Fl. i, 43 (1803).

Along creeks, valley of Lake Pend d'Oreille; August 23 (No. 947).

Polypogon monspeliensis (L.) Desf. Fl. Alt. i, 67 (1798); *Alopecurus monspeliensis* L. Sp. Pl. i, 89 (1753).

Sandy soil, near Spokane, Washington; August 17 (No. 920).

Cinna pendula glomerula Scribner, Proc. Acad. Phila: 1884, 290 (1884).

Along creeks near Rathdrum, Kootenai County, July 25 (No. 724).

This is a robust form with rough sheaths and leaves nearly 1 cm. wide, and with the florets nearly sessile in the numerous small spikelets, which are somewhat crowded in clusters along the rays of the ample panicle.

Agrostis exarata Trin. Dis. Unif. 207 (1824).

Bottom lands, valley of Cœur d'Alene River, Kootenai County; July 13 (No. 646). Wet places, valley of Traille River, Kootenai County; August 9 (No. 883).

- Agrostis exarata asperifolia** (Trin.) Thurb. Bot. Cal. ii, 273 (1880); *A. asperifolia* Trin. Mem. Acad. St. Pet. Sci. Nat. ser. 6, 318 (1845).
Gravel banks and in streams, valley of Traille River, Kootenai County; August 8 (No. 878).
- Agrostis scabra** Willd. Sp. Pl. i, 370 (1798); *A. hiemalis* (Walt.) B. S. P. Prel. Cat. N. Y. 68 (1888); *Cornucopiae hyemalis* Walt. (?) Fl. Car. 74 (1788).
Sandy soil, Farmington Landing, Lake Cœur d'Alene; July 4 (No. 547).
- Calamagrostis canadensis** (Mx.) Beauv. Agrost. 15 (1812); *Arundo canadensis* Mx. Fl. i, 73 (1803).
Alluvial soil, Farmington Landing, Lake Cœur d'Alene; July 5 (No. 561). Canyons, same locality; July 7 (No. 578). Shores, valley of Lake Tesemini, Kootenai County; July 21 (No. 694).
- Calamagrostis canadensis dubia** (Scribner) Vasey, Contr. Nat. Herb. iii, 80 (1892); *Deyeuxia dubia* Scribn. Bot. Gaz. xi, 174 (1886).
Bottom lands, valley of Cœur d'Alene River, Kootenai County; July 13 (No. 637).
- Calamagrostis cusickii** Vasey, Ill. N. A. Gr. ii, 39 (1892); *Deyeuxia cusickii* Vasey, Bot. Gaz. x, 224 (1885).
Hillsides, Farmington Landing, Lake Cœur d'Alene; July 12 (No. 630).
- Calamagrostis suksdorfii** Scribner; Vasey, Contr. Nat. Herb. iii, 82 (1892).
Farmington Landing, Lake Cœur d'Alene; July 6 (No. 564). Dry ridges, valley of Lake Tesemini, Kootenai County; July 21 (No. 682). Woods at the south end of Lake Pend d'Oreille; July 28 (No. 769).
Nos. 682 and 769 with straw-colored panicles are typical forms of the species, but No. 564, not quite mature, is referred to it with some doubt.
- Calamovilfa longifolia** (Hook.) Hack. True Grasses, 113 (1890); *Calamagrostis longifolia* Hook. Fl. Bor. Amer. ii, 241 (1840).
Plains, Colgate, near Glendive, Dawson County, Montana; September 5 (No. 999).
This species, with its strong, creeping rootstocks, is valuable for holding the light, drifting sands in the prairie region.
- Deschampsia cæspitosa** (L.) Beauv. Agrost. 91 (1812); *Aira cæspitosa* L. Sp. Pl. i, 64 (1753).
Wet places, head of Little Potlatch River, Latah County; June 17 (No. 419). Meadows, same locality; June 18 (No. 433). Canyons at Farmington Landing, Lake Cœur d'Alene; July 7 (No. 579). Hope, north end of Lake Pend d'Oreille, Kootenai County; August 21 (No. 945).
- Deschampsia calycina** Presl, Rel. Haenk. i, 251 (1830).
Frequent on sandy soil, valley of the Big Potlatch River, Nez Perces County; June 6 (No. 323).
- Deschampsia elongata** (Hook.) Munro; Benth. Pl. Hartw. 342 (1857); *Aira elongata* Hook. Fl. Bor. Amer. ii, 243, t. 228 (1840).
Common in copses, valley of Big Potlatch River, Nez Perces County; June 9 (No. 374). Moist places, head of Little Potlatch River, Latah County; June 18 (No. 439).
- Trisetum canescens** Buckley, Proc. Acad. Phila. 1862, 100 (1862).
Meadows, head of Little Potlatch River, Latah County; June 18 (No. 438). Moist places, same locality; June 20 (No. 440).
- Trisetum cernuum** Trin. Mem. Acad. St. Pet. ser. 6, i, 61 (1831).
Frequent in moist places, valley of Big Potlatch River, Nez Perces County; June 9 (No. 369). Farmington Landing, Lake Cœur d'Alene; July 4 (No. 541).

Trisetum subspicatum (L.) Beauv. Agrost. 88 (1812); *Aira subspicata* L. Syst. Veg. ed. 10, 673 (1769).

Mountains, south end of Lake Pend d'Oreille; August 3 (No. 819). Mountains of Packsaddle Peak, Kootenai County; August 6 (No. 848).

Danthonia californica Boland. Proc. Cal. Acad. ii, 182 (1862-63).

Meadows, head of Little Potlatch River, Latah County; June 21 (No. 476).

Danthonia californica unispicata Thurb. Bot. Cal. ii, 294 (1880).

Dry hills, head of Little Potlatch River, Latah County; June 20 (No. 453).

Spartina cynosuroides (L.) Willd. Enum. Pl. 80 (1809); *Dactylis cynosuroides* L. Sp. Pl. i, 71 (1753).

Shores of Lake Tesemini, Kootenai County; July 21 (No. 691).

Koeleria cristata (L.) Pers. Syn. i, 97 (1805); *Aira cristata* L. Sp. Pl. i, 63 (1753).

Sandy soil on Little Potlatch River, Nez Perces County; June 7 (No. 333).

Melica subulata (Griseb.) Scribner, Proc. Acad. Phila. 1885, 47 (1885); *Bromus subulatus* Griseb. Fl. Ross. iv, 358 (1849); *Melica acuminata* Boland. Proc. Cal. Acad. iv, 104 (1866).

Frequent in canyons, valley of Little Potlatch River, Latah County; June 13 (No. 387). Mountains, south end of Lake Pend d'Oreille; August 11 (No. 827).

Poa annua rigidiuscula var. nov.

Culms 15 to 20 cm. high, rather robust, striate, glabrous, leafy to the middle, tufted from running rootstocks, evidently perennial; leaves flat, mostly erect, abruptly acute or rounded at apex, 2 to 4 mm. wide, 2 to 5 cm. long; ligule obtuse, about 2 mm. long; sheaths smooth, shorter than the internodes, the lower ones membranaceous, the upper one keeled; panicle pyramidal, 3 to 4 cm. long, and spreading to nearly that width at the base; axis rigidly erect with 5 or 6 nodes; rays 2 to 4 at the base, 2 or single above, spikelet-bearing beyond the middle, smooth, rigid, and divaricate, or somewhat reflexed; spikelets 3- to 5- (usually 4-) flowered, about 5 mm. long; empty glumes smooth, nearly equal in length; nearly two-thirds as long as the lower floret, the first narrowly ovate, acute, the second broadly lanceolate, obtuse; floral glume 3 mm. long, broadly lance-oblong, obtuse, membranaceous above, prominently ciliate on the 5 nerves below the upper third; palea about one-fourth shorter than its glume, prominently ciliate on the keels; grain yellow, subtranslucent, slightly rugose under the lens, 1.5 mm. long, one-third as thick, slightly flattened or triquetrous, with a tuft of hairs at the apex. This variety differs from the type of the species in the running rootstock, rather robust rigid culms, short subobtuse leaves, rigid panicle, larger florets, and pubescent floral glumes.

Type specimen collected at Lapwai Agency, Nez Perces County, by J. H. Sandberg; May 5, 1892 (No. 134). Also found on the plains of eastern Oregon. It is said to be common in rich soil in this region.

Poa compressa L. Sp. Pl. i, 69 (1753).

Dry hillsides near Farmington Landing, Lake Cœur d'Alene; July 2 (No. 534).

Poa filifolia Vasey, Contr. Nat. Herb. i, 271 (1893).

"Culms densely clustered, from a slender rootstock, erect, slender, 16 to 24 inches high, with 2 or 3 distant, narrow, short-bladed leaves; radical leaves abundant, filiform, 6 to 10 inches long, flaccid, erect; leaves of the culm 2 to 3, distant, with long sheaths and short (1 to 3 inches), erect, filiform blades; ligule less than 1 line long, acute; panicle loose and flexuous, 3 to 4 inches long; branches capillary, scabrous, rather distant, the lower in twos or threes, unequal, the longer about 1.5 inches long, with few spikelets near the extremity, naked below; spikelets compressed, 3 to 5 lines long, rather loosely 5- to 7-flowered, on filiform pedicels; empty glumes nearly equal, one-third shorter than the adjacent florets, lance-ovate, acute, broadly scarious-margined; floral

glumes 2.5 to 3 lines long, lance-oblong, subacute, scarious at the apex, minutely scabrid throughout, slightly more so on the keel, intermediate nerves rather indistinct; palet nearly equaling the glume, scabrous on the keels."

Frequent on rocky hillsides, island in Clearwater River, near Upper Ferry, above Lewiston; May 2 (No. 86). Northern slopes, on Hatwai Creek, Nez Perces County; May 6 (No. 138, type number).

Poa flava L. Sp. Pl. i, 68 (1753); *Poa serotina* Ehrh. Beitr. vi, 83 (1791).

Wet places, near Farmington Landing, Lake Cœur d'Alene; July 4 (No. 543). Sandy soil, valley of Cœur d'Alene River, Kootenai County; July 12 (No. 632). Bottom lands, same locality; July 13 (No. 644). Moist places, valley of Big Potlatch River, Nez Perces County; June 9 (No. 1051).

Poa nemoralis L. Sp. Pl. i, 69 (1753).

Sandy soil, Farmington Landing, Lake Cœur d'Alene; July 4 (No. 545).

Poa nevadensis Vasey, Bull. Torr. Club, x, 66 (1883).

Frequent by roadsides, valley of Clearwater River, Nez Perces County; May 30 (No. 266). Banks of Big Potlatch River, Nez Perces County; June 4 (No. 305). Roadsides, same locality; June 9 (No. 354). Copses, same locality; June 9 (No. 375). Near Viola, Latah County; June 26 (No. 505).

This robust long-leafed "mountain blue grass" is one of the most valuable forage grasses in the region where it grows, and it is apparently well worthy of being tried in cultivation.

Poa pratensis L. Sp. Pl. i, 67 (1753).

Sparingly in meadows, head of Little Potlatch River, Latah County; June 18 (No. 437). Along creeks, 4 miles east of Farmington, Latah County; June 28 (No. 515). Sandy soil, Farmington Landing, Lake Cœur d'Alene; July 4 (No. 546).

Numbers 437 and 546 represent a peculiar mountain form of this species, somewhat more robust than usual, with a rather loose panicle of spikelets slightly larger than the average size of those in the eastern form, and usually more or less brightly colored with purple, often appearing almost iridescent through the coloration of the floral glumes. This form and also numerous intermediate forms connecting this with the typical form of the species have been collected in many localities in the Rocky Mountains from Northern Arizona and New Mexico to British America. It has been cultivated with success at one of the Canadian experiment farms.

Poa sandbergii Vasey, Contr. Nat. Herb. i, 276 (1893).

"Culms tufted, 10 to 16 inches long, slender, upper portion naked, the lower portions bearing about two sheaths with very short blades; leaves 2, the blade 1 inch long or less; ligule about 1 line long; panicle 1.5 to 3 inches long, sometimes very narrow, or less than 1 inch wide, the branches ascending, nearly smooth, the lower in twos or threes, unequal, the longer one 1 to 2 inches long, spikelet-bearing above the middle; spikelets short-pedicelated, 2- to 4-flowered about 3 lines long, often purplish; empty glumes lanceolate, subacute, about two-thirds as long as the adjacent florets; floral glumes linear-oblong, obtuse, nearly 2 lines long, sparsely pubescent or puberulent, somewhat villose near the base but not webbed, scarious at the apex; palet equaling its glume, pubescent on the keels; internode of the rachilla puberulent, one-half line long."

"It approaches some forms of *Poa tenuifolia* Nutt., from which it may be distinguished by its smaller spikelets, shorter florets, and more pubescent floral glumes."

Grassy slopes, valley of Clearwater River, Nez Perces County; May 14, (No. 164).

Poa tenuifolia Nutt. Proc. Acad. Phila. 1862, 96 (1862).

Frequent on banks of Hatwai Creek, Nez Perces County; May 17 (No. 183).
Hillsides, valley of Clearwater River, Nez Perces County; May 17 (No. 187).
Rocky places, scarce, near Hatwai Creek, Nez Perces County; May 27 (No. 260).
Meadows near Viola, Latah County; June 26 (No. 503).

Graphephorum wolfii Vasey, Grasses of the U. S. 42 (1883); *Trisetum wolfii* Vasey, Bot. Wheeler Surv. 194, t. 27 (1878).

Frequent in meadows, head of Little Potlatch River, Latah County; June 18 (No. 435).

Panicularia fluitans (L.) Kuntze, Rev. Gen. Pl. 782 (1891); *Festuca fluitans* L. Sp. Pl. i, 75 (1753); *Glyceria fluitans* R. Br. Prodr. Fl. Nov. Holl. i, 179 (1810).

Wet places near Rathdrum, Kootenai County; July 20 (No. 670). Wet shores, valley of Lake Tesemini, Kootenai County; July 22 (No. 702).

Panicularia nervata (Willd.) Kuntze, Rev. Gen. Pl. ii, 783 (1891); *Poa nervata* Willd. Sp. Pl. i, 389 (1798); *Glyceria nervata* Trin. Mem. Acad. St. Pet. ser. 6, i, 365 (1831).

Frequent in wet places, valley of Big Potlatch River, Nez Perces County; June 9 (Nos. 358, 360). Similar localities, valley of Little Potlatch River, Latah County; June 13 (No. 392). Farmington Landing, Lake Cœur d'Alene; July 4 (No. 540). Valley of Traille River, Kootenai County; August 8 (No. 876).

Panicularia pauciflora (Presl) Kuntze, Rev. Gen. Pl. ii, 783 (1891); *Glyceria pauciflora* Presl, Rel. Haenk. i, 257 (1830).

Near springs, scarce, valley of Big Potlatch River, Nez Perces County; June 9 (No. 356). Wet places, valley of Cœur d'Alene River, Kootenai County; July 13 (No. 636).

Panicularia remota (Fors.) Kuntze, Rev. Gen. Pl. ii, 782 (1891); *Poa remota* Fors. Act. Inst. Linn. Ups. i, t. 1 (1807); *Glyceria arundinacea* Kunth, Enum. i, 367 (1833).

Along creeks near Rathdrum, Kootenai County; July 25 (No. 718).

This belongs to a form readily recognized by its thick, almost succulent culm, broad leaves, and ample panicle of rather large spikelets.

Festuca jonesii Vasey, Contr. Nat. Herb. i, 278 (1893).

Frequent in wet places, valley of Little Potlatch River, Nez Perces County; June 14 (No. 394).

This species has often been mistaken for *F. occidentalis* Hook., which it resembles in the inflorescence, but it may be readily distinguished by its tall culms with abundant flat leaves.

Festuca microstachys Nutt. Journ. Acad. Phila. ser. 2, i, 187 (1847).

Rocky ground on Peter Creek, Nez Perces County; May 4 (No. 124).

Festuca myurus L. Sp. Pl. i, 74 (1753).

Frequent in sandy soil, valley of Clearwater River, Nez Perces County; June 2 (No. 291).

Festuca octiflora Walt. Fl. Car. 81 (1788); *Festuca tenella* Willd. Enum. i, 113 (1809).

Sandy river banks, scarce, valley of Clearwater River, Nez Perces County; June 2 (No. 290).

Festuca oregona Vasey, Bot. Gaz. ii, 126 (1877).

Meadows, near Viola, Latah County; June 26 (No. 504). Dry ridges, valley of Lake Tesemini, Kootenai County; July 21 (No. 683). On mountains at 900 meters altitude, same locality; July 22 (No. 703).

Festuca ovina L. Sp. Pl. i, 73 (1753).

Frequent in copses, head of Little Potlatch River, Latah County; June 20 (No. 451).

Festuca ovina polyphylla Vasey, ined.

Frequent in dry, sandy soil, valley of Little Potlatch River, Latah County; June 13 (No. 388).

This is the form which has been mentioned in published lists, but as the forms and named varieties of this group of *Festucas* are in a very unsettled state it is thought best not to give a description until the entire genus can be carefully studied.

Festuca rubra longearistata Hack. ined.

Farmington Landing, Lake Cœur d'Alene; July 4 (No. 544).

This form agrees well with specimens in the National Herbarium labeled with this name by Dr. Eduard Hackel, but its description is deferred for the reason already mentioned.

Festuca scabrella major Vasey, Contr. Nat. Herb. i, 278 (1893).

Plains on the North Fork of Hangman's Creek, Indian Reservation, Latah County; July 1 (No. 530).

Festuca viridula Vasey, Ill. N. A. Gr. ii, 93 (1893).

Summits of Packsaddle Peak, Kootenai County; August 5 (No. 831).

Bromus breviaristatus (Hook.) Buckl. Proc Acad. Phila. 1862, 98 (1862); *Ceratocloa breviaristata* Hook. Fl. Bor. Amer. ii, 253 (1840).

Common on rocky banks of Peter Creek, Nez Perces County; May 4 (No. 123). Waste ground, valley of Clearwater River, Nez Perces County; May 14 (No. 166). Roadsides, valley of Little Potlatch River, Nez Perces County; June 7 (No. 331). Meadows, head of Little Potlatch River, Latah County; June 18 (No. 434).

Bromus brizæformis Fisch. & Mey. Ind. Sem. Petrop. iii, 30 (1836).

In meadows, only near Viola, Latah County; June 23 (No. 482).

Bromus ciliatus L. Sp. Pl. i, 76 (1753).

Open places, valley of Pine Creek, near Farmington, Latah County; June 29 (No. 523). Canyons, Farmington Landing, Lake Cœur d'Alene; July 7 (No. 582). Woods on the St. Joseph River, Wiessner's Peak, Kootenai County; July 8 (No. 599).

Bromus hordeaceus L. Sp. Pl. i, 77 (1753); *Bromus mollis* L. Sp. Pl. ed. 2, i, 112 (1762).

Frequent on waste ground, valley of Clearwater River, Nez Perces County; May 14 (No. 167).

Bromus secalinus L. Sp. Pl. i, 76 (1753).

Hillsides, south shore of Lake Cœur d'Alene; July 1 (No. 531).

Agropyron divergens Nees; Steud. Syn. Gram. 347 (1855).

Frequent on rocky ground, valley of Clearwater River, Nez Perces County; May 16 (No. 178). Sandy river banks, same locality; June 2 (No. 297). Hillsides, valley of Little Potlatch River, Latah County; June 13 (No. 382). Meadows near Viola, Latah County; June 23 (No. 481). On basaltic rocks at Farmington Landing, Lake Cœur d'Alene; July 5 (No. 559).

Agropyron repens glaucum (Desf.) Scribner, Mem. Torr. Club, v, 57 (1894); *Triticum glaucum* Desf. Tabl. Bot. Mus. 16 (1804); *Agropyron glaucum* Rœm. & Schult. Syst. Veg. ii, 752 (1817).

Mountains near Lake Tesemini, Kootenai County; July 22 (No. 704).

Agropyron tenerum Vasey, Bot. Gaz. x, 258 (1885).

Rocky ground, valley of Clearwater River, Nez Perces County; May 16 (No. 179). Dry prairies near Rathdrum, Kootenai County; July 15 (No. 714).

Agropyron violaceum major Vasey, Contr. Nat. Herb. i, 280 (1893).

Farmington Landing, shore of Lake Cœur d'Alene; July 5 (No. 556).

Hordeum jubatum L. Sp. Pl. i, 85 (1753).

Common on waste grounds, near Viola, Latah County; June 23 (No. 483).

Hordeum nodosum L. Sp. Pl. ed. 2, i, 126 (1762).

Frequent in sandy soil, valley of Clearwater River, Nez Perces County; May 9 (No. 146). Meadows near Viola, Latah County; June 26 (No. 493). Valley of Lake Pend d'Oreille; August 25 (No. 958).

This form, which is referred here until the genus can be more thoroughly studied, differs from the type in the short, flat leaves, pubescent on both sides, with inflated sheaths, the lower sheaths being retrorsely pubescent; in the spikes shorter and thicker than usual, with awns 10 to 15 mm. long, and in the sterile florets on stipes about $1\frac{1}{2}$ mm. long.

Hordeum pusillum Nutt. Gen. i, 87 (1818).

Hillsides, scarce, valley of Big Potlatch River, Nez Perces County; June 8 (No. 370).

Elymus canadensis L. Sp. Pl. i, 83 (1753).

On Hellgate River, Bonner, Missoula County, Montana; August 30 (No. 982).

Elymus condensatus Presl, Rel. Haenk. i, 265 (1830).

Frequent in sandy soil, valley of Hatwai Creek, Nez Perces County; May 27 (No. 262).

Elymus glaucus Buckl. Proc. Acad. Phila. 1862, 99 (1862); *Elymus sibiricus* Hook. Fl. Bor. Amer. ii, 255 (1840), not L.; *Elymus americanus* Vasey & Scribner, in Macoun, Cat. Can. Pl. 245 (1888).

Common in copses, valley of Big Potlatch River, Nez Perces County; June 9 (No. 353). Along creeks, Farmington Landing, Lake Cœur d'Alene; July 6 (No. 571).

CONIFERÆ.¹

Pinus contorta Loudon, Arb. et Frut. iv, 2292, f. 2210, 2211 (1838).

Woods, Farmington Landing, Lake Cœur d'Alene; July 12 (No. 627).

Pinus ponderosa Dougl.; Lawson's Manual, 354 (1836)

Banks of Clearwater River, Nez Perces County; April 26 (No. 51).

A good-sized tree.

Larix occidentalis Nutt. Sylva, iii, 143, t. 120 (1849).

Common in woods, at 600 meters altitude, Craig Mountains, near Lake Waha, Nez Perces County; May 20 (No. 206).

Sometimes 6 or 8 feet in diameter.

Juniperus nana Willd. Berl. Baumz. ed. 1, 159 (1796); *J. communis* Gaudich. Fl. Helv. vi, 301 (1830).

Summits of Packsaddle Peak, Kootenai County; August 5 (No. 830).

Juniperus virginiana L. Sp. Pl. ii, 1039 (1753).

Rocky shore at south end of Lake Pend d'Oreille; August 4 (No. 824).

Tsuga mertensiana (Bong.) Carrière, Trait. Conif. ed. 2, 250 (1867); *Pinus mertensiana* Bong. Veg. Sitch. 163 (1831).

Canyons near Rathdrum, Kootenai County; July 23 (No. 708).

Pseudotsuga mucronata (Raf.) Sudworth, nom. nov.; *Pinus taxifolia* Lamb. Pinus, ed. 1, 51, t. 33 (1803), not Salisb. (1796); *Abies mucronata* Raf. Atl. Journ. 119 (1832); *Ps. douglasii* Carrière, Trait. Conif. nouv. éd. 256 (1867); *Ps. taxifolia* Britton, Trans. N. Y. Acad. viii, 741 (1889).

Woods, Farmington Landing, Lake Cœur d'Alene; July 12 (No. 629).

¹The *Conifera* were determined by Mr. George B. Sudworth, botanist of the Division of Forestry, U. S. Department of Agriculture.