

Ouray National Wildlife Refuge Vegetation Mapping Project

V.A.5.N.k.13. *JUNCUS BALTICUS SEASONALLY FLOODED HERBACEOUS ALLIANCE*

Baltic Rush Seasonally Flooded Herbaceous Alliance

Alliance Identifier: A.1374

Juncus balticus Herbaceous Vegetation

Baltic Rush Herbaceous Vegetation

Baltic Rush Wet Meadow

ELEMENT CONCEPT

GLOBAL SUMMARY: This Baltic rush wet meadow community is found widely throughout the western United States. This wet meadow vegetation occurs as small, dense patches on flat stream benches, along overflow channels, and near springs. Soils are usually sandy clay loam or fine sands and mottled or gleyed. Stands are characterized by a dense sward of *Juncus balticus* and often minor cover of *Carex* species, including *Carex aquatilis*, *Carex praegracilis*, *Carex nebrascensis*, or *Carex utriculata*. Other common species include *Deschampsia caespitosa*, *Distichlis spicata*, *Glyceria striata*, *Hordeum jubatum*, *Muhlenbergia asperifolia*, *Phleum alpinum*, and *Sporobolus airoides*. The introduced perennial sod grasses *Poa pratensis* or *Agrostis stolonifera* codominate some stands. Forb cover is generally low and includes wetland species like *Caltha leptosepala* and *Dodecatheon pulchellum*. Shrubs are not common. This association is often considered to be a grazing-induced community since it increases with disturbance.

ENVIRONMENTAL DESCRIPTION

USFWS WETLAND SYSTEM: PALUSTRINE

Ouray National Wildlife Refuge Environment: *Juncus balticus* Herbaceous Vegetation occupies the edge of a broad drainage, adjacent to stands of *Phalaris arundinacea* and *Phragmites communis*. The soil is moist, silty clay with a slight seleniferous odor. Hydrology for the stand is apparently near-to-surface ground water.

Global Environment: This widespread herbaceous wetland community is found throughout western North America. Elevation ranges from 1420-3500 m. Stands usually occur as small, dense patches on flat to gently sloping sites near seeps and streams. Stream channels are highly variable in size and type ranging from narrow to moderately wide, and deeply entrenched to very sinuous (Kittel et al. 1999). Soils are also variable and range from alluvial sandy and well-drained, to poorly drained silty clay loam, to organic; however, soils tend to be finer-textured, alkaline and may be saline (Brotherson and Barnes, Kittel et al. 1999, Padgett et al. 1989). Cobbles and gravel are common on many sites, and gleyed and mottled horizons are often present because of flooding or high water tables (Kittel et al. 1999).

VEGETATION DESCRIPTION

Ouray National Wildlife Refuge Vegetation: This small stand has approximately 80% foliar cover and is dominated by *Juncus balticus*. The vegetation is short-statured, less than 0.5 m tall. In addition to Baltic rush, *Muhlenbergia asperifolia*, *Hordeum jubatum*, *Sonchus asper*, *Lactuca serriola*, and *Agropyron intermedium* is present in the stand. Typically, Baltic rush is not found in pure stands in the Refuge, rather it is a fairly rare associate of other emergent wetland stands.

Global Vegetation: This association is characterized by a low (<50 cm), dense graminoid layer dominated by the rhizomatous perennial *Juncus balticus*. Minor cover of *Carex* species, including *Carex aquatilis*, *Carex praegracilis*, *Carex nebrascensis* or *Carex utriculata*, is often present. Other common graminoids include *Deschampsia caespitosa*, *Distichlis spicata*, *Glyceria striata*, *Hordeum jubatum*, *Muhlenbergia asperifolia*, *Phleum alpinum*, and *Sporobolus airoides*. Forb cover is generally low but may include *Caltha leptosepala*, *Glauca maritima*, *Maianthemum stellatum*, and *Dodecatheon pulchellum*. Shrubs are not common, but occasional *Salix* spp. may occur. Some stands may be codominated by the introduced perennial sod grasses *Poa pratensis* or *Agrostis stolonifera*. Other introduced species, such as *Taraxacum officinale*, *Trifolium* spp., *Cirsium arvense*, *Lactuca serriola*, *Phleum pratense*, and *Thinopyrum intermedium*, may occur in disturbed stands.

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Dynamics: This association is considered by some to be a grazing-induced community because *Juncus balticus* is tolerant of grazing (low palatability when mature) and increases with grazing disturbance (Hansen et al. 1995, Padgett et al. 1989). Nearly pure stands of *Juncus balticus* may indicate that the site was heavily grazed in the past (Hansen et al. 1995). However, this association also occurs as a stable, late-seral community in areas with low disturbance (Kittel and Lederer 1993).

MOST ABUNDANT SPECIES

Ouray National Wildlife Refuge

Stratum	Species
GRAMINOID	<i>Juncus balticus</i> , <i>Muhlenbergia asperifolia</i> , <i>Hordeum jubatum</i>

Global

Stratum	Species
GRAMINOID	<i>Carex nebrascensis</i> , <i>Carex praegracilis</i> , <i>Juncus balticus</i>

CHARACTERISTIC SPECIES

Ouray National Wildlife Refuge

Species
Juncus balticus, *Muhlenbergia asperifolia*, *Hordeum jubatum*

Global

Species
Carex nebrascensis, *Carex praegracilis*, *Juncus balticus*

OTHER NOTEWORTHY SPECIES

Ouray National Wildlife Refuge

Stratum	Species
N/A	

Global

Stratum	Species
N/A	

OURAY NATIONAL WILDLIFE REFUGE SIMILAR ASSOCIATIONS:

Scirpus pungens Herbaceous Vegetation occupies similar habitats

GLOBAL SIMILAR ASSOCIATIONS:

Eleocharis palustris - *Juncus balticus* Herbaceous Vegetation (CEGL001835)

Juncus balticus - *Carex rossii* Herbaceous Vegetation (CEGL001839)

SYNONYMY:

Juncus balticus Wetland Plant Association (Baker 1984a)

Saline Meadow (Brotherson and Barnes 1984)

Juncus balticus Herbaceous Vegetation (Faber-Langendoen 2001)

Juncus balticus Community Type (Hansen et al. 1995)

Juncus balticus Community Type (Hall and Hansen 1997)

Baltic Rush (*Juncus balticus*) Dominance Type (Jones and Walford 1995)

Juncus arcticus/*Carex* spp. Plant Association (Johnston 1987)

Juncus balticus Herbaceous Vegetation Association (Kittel et al. 1999)

Baltic Rush Alliance (Muldavin et al. 2000a) B. includes 5 similar *Juncus balticus* community types.

Juncus balticus Vegetation Type (Mutz and Graham 1982) includes 5 similar *Juncus balticus* community types.

Juncus balticus/*Carex* spp. Habitat Subtype (Olson and Gerhart 1982) includes 5 similar *Juncus balticus* community types.

Juncus balticus Community Type (Padgett et al. 1989) includes 5 similar *Juncus balticus* community types.

Juncus balticus dominated (Zone 3) (Shupe et al. 1986) Zone 3 is the outer zone of the Great Basin playa.

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Juncus balticus Community Type (Tuhy and Jensen 1982) Zone 3 is the outer zone of the Great Basin playa.

Juncus balticus/*Carex* spp. Habitat Type (Wasser and Hess 1982) . Zone 3 is the outer zone of the Great Basin playa.

Juncus balticus Community Type (Youngblood et al. 1985a) . Zone 3 is the outer zone of the Great Basin playa.

CLASSIFICATION COMMENTS

Ouray National Wildlife Refuge: N/A

Global Comments: This association is often considered to be a grazing-induced community since it increases with grazing disturbance.

ELEMENT DISTRIBUTION

Ouray National Wildlife Refuge Range: One patch of *Juncus balticus* Herbaceous Vegetation was observed in the large drainage near the Refuge entryway. *Juncus balticus* is only a minor component of some emergent wetlands within the Refuge.

Global Range: This Baltic rush wet meadow community is found widely throughout the western United States, ranging from South Dakota and Montana west to Washington, south to possibly California, and east to New Mexico.

Nations: US

States/Provinces: CA? CO ID MT NM NV OR SD UT WA WY

TNC Ecoregions: 10:C, 11:C, 17:C, 18:C, 19:C, 20:C, 25:C, 26:C, 27:C, 2:C, 6:C

USFS Ecoregions: 313A:CC, 331D:CC, 331F:CC, 331G:CC, 331H:CC, 331I:CC, 341B:CC, 341C:CC, 342A:CC, 342B:CC, 342C:CC, 342D:CC, 342F:CC, 342G:CC, 342I:C?, M261G:CC, M262:C, M313B:CC, M331A:CC, M331B:CC, M331D:CC, M331E:CC, M331F:CC, M331G:CC, M331H:CC, M331I:CC, M332A:CC, M332B:CC, M332C:CC, M332D:CC, M332E:CC, M332F:CC, M332G:CC, M333A:CC, M333B:CC, M333C:CC, M333D:CC, M334A:CC, M341B:CC, M341C:CC

Federal Lands: NPS (Zion); USFWS (Ouray)

ELEMENT SOURCES

Identifier: CEGL001838 **Confidence:** 1 **Conservation Rank:** G5

REFERENCES: Baker 1984a, Brotherson and Barnes 1984, Bunin 1985, Faber-Langendoen 2001, Flowers 1962, Hall and Hansen 1997, Hansen et al. 1988b, Hansen et al. 1991, Hansen et al. 1995, Hess 1981, Johnston 1987, Jones and Walford 1995, Kartesz 1994, Kittel and Lederer 1993, Kittel et al. 1994, Kittel et al. 1999, Komarkova 1986, Manning 1988, Muldavin et al. 2000a, Mutel 1973, Mutz and Graham 1982, Olson and Gerhart 1982, Padgett 1982, Padgett et al. 1989, Rector 1979, Richard et al. 1996, Shupe et al. 1986, Stewart 1940, Thompson 2001, Tuhy and Jensen 1982, Von Loh 2000, Wasser and Hess 1982, Youngblood et al. 1985a.