

Ouray National Wildlife Refuge Vegetation Mapping Project

V.A.5.N.1.16. *SCHOENOPLECTUS ACUTUS* - (*SCHOENOPLECTUS TABERNAEMONTANI*) *SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE*

Hardstem Bulrush - (Softstem Bulrush) Semipermanently Flooded Herbaceous Alliance

Alliance Identifier: A.1443

Schoenoplectus acutus Herbaceous Vegetation

Hardstem Bulrush Herbaceous Vegetation

Bulrush Marsh

ELEMENT CONCEPT

GLOBAL SUMMARY: This association is a common emergent herbaceous wetland found mostly in the interior western U.S. ranging from the Puget Sound of Washington to Montana south to California, Nevada and Utah. Stands occur along low-gradient, meandering, usually perennial streams, river floodplain basins, and around the margins of ponds and shallow lakes especially in backwater areas. Some sites are flooded most of the year with about 1 m of fresh to somewhat saline or alkaline water. Other sites, however, dry up enough in late summer to where the water table drops below the ground surface, though the soils are still partially saturated. Soils are generally deep, organic, alkaline, poorly drained and fine-textured, but range in soil textures from sand to clay to organic muck. The soils may be normal or saline. Vegetation is characterized by a dense tall herbaceous vegetation layer 1-3 m tall that is dominated by *Schoenoplectus acutus*, often occurring as a near monoculture. Associated species include low cover of *Mentha arvensis*, *Polygonum amphibium*, *Sagittaria latifolia*, and species of *Carex*, *Eleocharis*, *Rumex*, and *Typha*. Early in the growing season or at permanently flooded sites, aquatic species such as *Potamogeton* spp. and *Lemna minor* may be present to abundant. Stands of this association contain no tree or shrub layer, but a few sites have been invaded by the introduced shrub *Tamarix* spp.

ENVIRONMENTAL DESCRIPTION

USFWS WETLAND SYSTEM: PALUSTRINE

Ouray National Wildlife Refuge Environment: *Schoenoplectus acutus* Herbaceous Vegetation has become established on inundated sites and in saturated soils. Some of these sites are basins managed by releasing water through canal, ditch, and dike systems, while others are natural tributary drainages and side channels of the Green River. Soils associated with these stands are saturated muck.

Global Environment: This association is a common emergent herbaceous wetland found mostly in the interior western U.S. Elevations range from near sea level to 2030 m. Stands occur along low-gradient, meandering, usually perennial streams, river floodplain basins and around the margins of ponds and shallow lakes especially in backwater areas. Some sites are flooded most of the year with about 1 m of fresh to somewhat saline or alkaline water. Other sites, however, dry up enough in late summer to where the water table drops below the ground surface, though the soils are still partially saturated. Soils are generally deep, organic, alkaline, poorly drained and fine-textured, but range in soil textures from sand to clay to organic muck. The soils may be normal or saline.

VEGETATION DESCRIPTION

Ouray National Wildlife Refuge Vegetation: Stands of *Schoenoplectus acutus* Herbaceous Vegetation are largely monotypic, with diversity occurring at the edge of the clones. In some situations there is a nearly equal mix of *Typha* spp., particularly where stands are growing adjacent to one another. Foliar cover by *Schoenoplectus acutus* is difficult to evaluate because of its narrow, upright stems. However, approximately 60% foliar cover was estimated for hardstem bulrush in each stand sampled. Total foliar cover with other species included ranged from approximately 60-90%. These stands are tall, because hardstem bulrush exceeds three m in height within the Refuge. Other species recorded with hardstem bulrush included seedling *Tamarix ramosissima*, and *Typha angustifolia* (*Typha domingensis*), *Typha latifolia*, *Lepidium latifolium*, *Atriplex rosea*, and *Rumex stenophyllous*.

Global Vegetation: This wetland association is characterized by a dense tall herbaceous vegetation layer 1-3 m tall that is dominated by *Schoenoplectus acutus*, often occurring as a near monoculture. Associated species include low cover of *Mentha arvensis*, *Polygonum amphibium*, *Sagittaria latifolia*, and species of *Carex*, *Eleocharis*, *Rumex*, and *Typha*. Early in the growing season or at the more permanently flooded sites, aquatic species such as *Potamogeton* spp. and *Lemna minor* may be present to abundant. Stands of this association contain no tree or shrub layer, but a few sites have been invaded by the introduced shrub *Tamarix* spp.

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Dynamics: N/A

MOST ABUNDANT SPECIES

Ouray National Wildlife Refuge
Stratum **Species**
SHRUB *Tamarix ramosissima*
HERBACEOUS *Schoenoplectus acutus*

Global
Stratum **Species**
GRAMINOID *Schoenoplectus acutus*

CHARACTERISTIC SPECIES

Ouray National Wildlife Refuge
Species
Schoenoplectus acutus

Global
Species
Schoenoplectus acutus

OTHER NOTEWORTHY SPECIES

Ouray National Wildlife Refuge
Stratum **Species**
N/A

Global
Stratum **Species**
N/A

GLOBAL SIMILAR ASSOCIATIONS:

Schoenoplectus acutus - *Typha latifolia* - (*Schoenoplectus tabernaemontani*) Sandhills Herbaceous Vegetation (CEGL002030)

Schoenoplectus acutus - (*Schoenoplectus fluviatilis*) Freshwater Herbaceous Vegetation (CEGL002225)

Typha spp. - *Schoenoplectus acutus* - Mixed Herbs Midwest Herbaceous Vegetation (CEGL002229)

SYNONYMY:

Scirpus acutus community type (Kunze 1994) . (p.24,81) Kunze (1994) use both *Schoenoplectus acutus* and *Schoenoplectus validus* as indicator species.

Scirpus acutus community type (Dethier 1990) . (p.36)

Scirpus acutus Dominance Type (Evans 1989a) . (p.30)

Scirpus acutus Habitat Type (Hansen et al. 1995) B. Hansen et al. (1995) put stands dominated by *Scirpus validus* in this Habitat Type (p.458).

Scirpus pungens Plant Association (Bundy et al. 1996) . (p.F21)

CLASSIFICATION COMMENTS

Ouray National Wildlife Refuge: N/A

Global Comments: This association appears to be somewhat variable in flood regime. It is flooded less time than some of the other *Schoenoplectus acutus* associations in this semipermanently flooded alliance with some stands included in this association occurring in a seasonally flooded hydrologic regime. However, stands described by Kunze (1994) from western Washington were permanently flooded with shallow water (about 1 m deep). Additional research is needed to determine if the different hydrological regimes indicate a need to split out new associations.

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ELEMENT DISTRIBUTION

Ouray National Wildlife Refuge Range: *Schoenoplectus acutus* Herbaceous Vegetation occurs as nearly monotypic stands in managed Green River floodplain bottoms, tributary drainages, and in wetland depressions within the Refuge.

Global Range: This association is a common emergent wetland found mostly in the interior western U.S. from Washington to Montana south to California, Nevada and Utah.

Nations: US

States/Provinces: CA ID MT NV OR UT WA

TNC Ecoregions: 10:C, 11:C, 17:C, 2:C, 6:C

USFS Ecoregions: 242A:CC, 262A:??, 331:C, 341C:CC, 341E:CC, 342A:CC, 342B:CC, 342C:CC, 342D:CC, 342F:CC, 342H:CC, 342I:CC, M242A:CC, M242B:CC, M242C:CC, M261:C, M331A:CC, M331D:CC, M332G:CC, M333A:CC, M333B:CC, M333C:CC, M333D:CC

Federal Lands: USFWS (Ouray)

ELEMENT SOURCES

Identifier: CEGL001840 **Confidence:** 1 **Conservation Rank:** G5

REFERENCES: Bundy et al. 1996, Dethier 1990, Evans 1989a, Hansen et al. 1991, Hansen et al. 1995, Kunze 1994, Von Loh 2000.