

(Padgett *et al.* 1989): *Carex utriculata* provides valuable breeding and feeding grounds for waterfowl and snipe. Common yellowthroats, red-winged blackbirds, song sparrows, and tree swallows are commonly associated with this community (Crowe and Clausnitzer 1997).

OTHER NOTEWORTHY SPECIES Information not available.

ADJACENT COMMUNITIES Because of the wide elevational and geographical distribution, adjacent upland communities can range from sagebrush-steppe at the lower elevations (rare) to a diversity of montane and subalpine coniferous forest types.

CONSERVATION RANK G5 S4

SUCCESSION AND MANAGEMENT *Carex utriculata* is a widespread species that occupies mineral or organic soils with seasonably high water tables. This community typically colonizes recently formed ponds and/or sites in or adjacent to low-gradient stream channels. It has been observed that *C. utriculata* has higher cover on sites that are seasonally flooded; continually inundated sites had decreased shoot density. It can colonize permanently flooded sites, often doing so from the outer edge. As soil and litter build up, these sites are more conducive to increased *C. utriculata* dominance. This species is relatively long-lived and maintains dominance with high soil moisture; communities are at potential for these sites. As soil moisture decreases, other species such as *C. nebraskensis*, *C. simulata*, or *Deschampsia cespitosa* may replace *C. utriculata* (Manning and Padgett 1995).

Though *C. utriculata* produces large amounts of herbage every year, it apparently is relatively unpalatable to livestock, especially as it matures. It is a coarse sedge with high amounts of silica in its leaf cells. The dense network of rhizomes and roots provides excellent streambank stabilization.

CLASSIFICATION COMMENTS Classification of this community is based on many plots from Washington, Oregon, Nevada, Idaho, Montana, Wyoming, Utah, New Mexico, and Colorado.

EDITION 1998-01-02

EDITION AUTHOR B. Moseley

SCIRPUS ACUTUS

COMMON NAME Hardstem Bulrush

PHYSIOGNOMIC TYPE Herbaceous

SIMILAR COMMUNITIES Hansen *et al.* (1995) and Hall and Hansen (1997) have a *Scirpus*

acutus habitat type in their classifications that includes all combinations of *Scirpus acutus* and *S. validus* (= *S. tabernaemontani*) due to similarities in environmental conditions and management concerns. *Scirpus validus* is often treated as a separate alliance in the Western Regional Vegetation Classification (Bourgeron and Engelking 1994).

Cole (1995) described four associations with *S. acutus* as the dominant species, *S. acutus-Veronica anagallis-aquatica*, *S. acutus-Lemna* sp., *S. acutus-Lemna* sp.-*Solanum dulcamara*, and *S. acutus-Typha latifolia*. The *Scirpus acutus* type described in this CCA encompasses enough compositional and structural variation to include Cole's types.

RANGE Stands are known from Oregon, Washington, Nevada, California, Idaho, and Montana.

SOILS Soils are commonly Mollisols (Aquolls), Entisols (Aquepts), or occasionally Histisols. Textures of surface horizons on long-lived stands are predominantly fines, which appear as black or gleyed, mucky clay or silty loam soils with high concentrations of decomposed and partially decomposed plant material that accumulate over time from annual dieback. Alluvial sands, gravels and cobbles may form an unconsolidated matrix in the subsurface horizons. Water tables are generally at or above the soil surface throughout the growing season. Soil reaction varies from neutral to moderately alkaline (pH 7.0 to 8.0)(Hansen *et al.* 1995; Hall and Hansen 1997).

ENVIRONMENTAL DESCRIPTION Stands of this community type occur along the margins of ponds, lakes, and reservoirs, stringers paralleling stream and river channels, or broad swaths in backwater marshes and sloughs. It is found at low to mid-elevations, from about 2,000 feet to at least 6,600 feet. This type often inhabits relatively deep water, although the water level may be drawn down considerably through the growing season (Hansen *et al.* 1995; Hall and Hansen 1997).

MOST ABUNDANT SPECIES

Strata	Species
Herbaceous	<i>Scirpus acutus</i> , <i>Typha latifolia</i> , <i>Lemna</i> sp., <i>Solanum dulcamara</i>

VEGETATION DESCRIPTION The *Scirpus acutus* type usually appears as an impenetrable monotypic stand often reaching 2 m or more in height. *Scirpus* spp. require high levels of moisture throughout the year, and while stands may colonize saturated soils along streambanks or on the periphery of ponds and reservoirs, they typically extend out into the water column to 2 m in depth. Due to the dense growth form and flooded water regimes, other species are largely absent, or if present, in limited amounts (Cole 1995; Hansen *et al.* 1995; Hall and Hansen 1997).

WILDLIFE VALUES *Scirpus acutus* provides valuable nesting and roosting cover for a variety of songbirds and waterfowl, notably red-winged blackbirds, yellow-headed blackbirds and

wrens. *Scirpus acutus* is a staple for muskrats and is used in construction of their huts. Seeds of *S. acutus* are eaten by a variety of birds. Waterfowl managers often attempt to increase the proportion of *S. acutus* relative to *Typha latifolia* as a means of improving habitat (Hall and Hansen 1997).

OTHER NOTEWORTHY SPECIES A vascular plant species rare in Idaho, *Teucrium canadense*, occurs in the ecotone between this community and the *Sarcobatus vermiculatus*/*Distichilis stricta* type at one site.

CONSERVATION RANK G5 S4

SUCCESSION AND MANAGEMENT *Scirpus acutus* occupies some of the wettest sites on the landscape and tolerates prolonged flooding better than most riparian communities. These highly saturated conditions, coupled with an extremely dense growth form, allow this species to colonize sites at an early successional stage and maintain dominance on undisturbed sites as the climax vegetation. However, *Scirpus acutus* is regularly accompanied by other hydrophytes, such as *Sparganium emersum* and *Typha latifolia*. The reasons for the distribution of these species is difficult to discern, but minor changes in water chemistry or nutrient availability may favor the expansion of one species over another. Seasonal climatic changes may also play a role in determining which species may dominate a site at a particular point in time (Hall and Hansen 1997). Cole (1995) discusses tentative successional relationships of her *Scirpus acutus* types.

Wet conditions and lack of palatable forage limit livestock use of this type. However, if upland forage becomes sparse and soil conditions dry, livestock may make use of *Scirpus acutus*. Soils are wet throughout the growing season and easily damaged from trampling by livestock and wildlife. Vegetation can also be damaged by trampling. This community will burn in either late fall or early spring if the water levels have dropped sufficiently (Hansen *et al.* 1995).

CLASSIFICATION COMMENTS Classification is based on sampling of 58 stands in Montana (Hansen *et al.* 1995); an unknown number of stands in Washington (Evans 1989); 6 stands in eastern Idaho (Hall and Hansen 1997); and at least 22 stands in Idaho (Cole 1995).

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EDITION AUTHOR B. Moseley

SCIRPUS PUNGENS

COMMON NAME Common Threesquare

PHYSIOGNOMIC TYPE Herbaceous

SIMILAR COMMUNITIES

Stands of the *Scirpus americanus* association are dominated by *Scirpus americanus* instead of *S. pungens*.

RANGE This community has so far been documented in Montana, Wyoming, and Idaho.

SOILS Stands of this association have been sampled on Fluvaquents and Haplaquolls in Montana (Hansen *et al.* 1995). Textures of the upper soil horizons may be clay, clay loam, and sandy loam (Hansen *et al.* 1995, Jones and Walford 1995, Walford 1996). Loamy sand has been found deep in the soil profile (Walford 1996). In Idaho, this type occupied a sand bar with the watertable about 0.5 m below the soil surface. A soil gradient was observed from the upland edge of the community to the waters edge. As the watertable level became higher, the soil color became increasingly gray to eventually black at about 2 cm depth, near the water edge. Following this gradient, the *Carex* (mostly *C. lanuginosa*) component of the community decreased as the soils became more persistently saturated near the sand surface and the degree of aeration decreased. Nearest the waters edge, the soil odor was obviously sulphurous, and *Carex* was absent (Fisher 1997).

ENVIRONMENTAL DESCRIPTION Stands of this association are found along low-gradient, meandering, usually perennial streams and around the margins of ponds and marshes (Hansen *et al.* 1995, Jones and Walford 1995, Walford 1996).

MOST ABUNDANT SPECIES

<u>Strata</u>	<u>Species</u>
Herbaceous	<i>Scirpus pungens</i>

VEGETATION DESCRIPTION *Scirpus pungens* dominates the herbaceous vegetation layer, which is 1 foot to 2 feet tall; other species that often are present are *Scirpus americanus*, *Spartina gracilis*, *Hordeum jubatum*, *Agropyron smithii*, and *Eleocharis palustris*. Stands of this association contain no tree or shrub layer, but a few scattered trees and shrubs may be present, most commonly *Salix exigua*.

WILDLIFE VALUES The *Scirpus pungens* habitat type is an important source of shade, hiding cover, and food for wildlife. *Scirpus pungens* is used by muskrats for construction of huts. Waterfowl use this type for nesting and hiding cover. Other birds such as red-winged blackbirds and yellow-headed blackbirds are common inhabitants (Hansen *et al.* 1995).

OTHER NOTEWORTHY SPECIES The rare riparian species in Idaho, *Teucrium canadense*, was observed on the margins of this community type.

ADJACENT COMMUNITIES Adjacent wetter sites often support stands of *Eleocharis palustris* herbaceous vegetation, *Typha latifolia* herbaceous vegetation, or *Scirpus acutus* herbaceous vegetation. Adjacent drier riparian sites often support stands of *Spartina pectinata*

herbaceous vegetation, *Spartina gracilis* herbaceous vegetation, *Distichlis stricta* herbaceous vegetation, or *Agropyron smithii* herbaceous vegetation.

CONSERVATION RANK G? S1

SUCCESSION AND MANAGEMENT Stands of this association are flooded in the spring (Larson 1993). *Scirpus pungens* becomes established on wet, bare sediments and often comes to dominate such sites quickly (Hansen *et al.* 1995).

Stands of this association produce abundant herbage, but most of the species are relatively unpalatable to livestock, so use is light unless little other forage is available. The vegetation provides nesting and hiding cover for waterfowl and songbirds, and food for a variety of animal species. Warm-water fish may use inundated stands as spawning beds. The strong rhizomes of *Scirpus pungens* provide moderate protection to streambanks from erosion (Hansen *et al.* 1995).

CLASSIFICATION COMMENTS The *Scirpus pungens* habitat type described from Montana (Hansen *et al.* 1995) includes vegetation dominated by all combinations of *Scirpus pungens* and *S. americanus*. In Idaho, areas dominated by *S. americanus* are recognized as a separate community type. This type has been described from eastern Wyoming (Jones and Walford 1995) and from Wyoming's Bighorn Basin (Walford 1996).

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EDITION AUTHOR G. P. Jones

CAMASSIA CUSICKII SEEP

COMMON NAME Cusick's Camas Seep

PHYSIOGNOMIC TYPE Herbaceous

SIMILAR COMMUNITIES This community is unique and not easily confused with anything else.

RANGE This community (and species) is endemic to the southern end of Hells Canyon, mostly in Oregon, with a few occurrences in adjacent Idaho. In Oregon it occurs in portions of the Imnaha River and Pine Creek drainages, as well as the main Snake River (Hells) canyon (Johnson and Simon 1987). Across the Snake River in Idaho, occurrences are known from an area of the canyon centered on Oxbow Dam.

SOILS The highly oxidized reddish soils of Cusick's camas communities are shallow and had clay to clay loam surface horizons. The parent material is basalt and the solum depth averaged 40 inches (Johnson and Simon 1987).

ENVIRONMENTAL DESCRIPTION The characteristic site for this community is beneath basalt rims on colluvial inter-rim locations where seepage water persists well into the early summer, permitting the large bulbiferous camas plants to grow and flower in dense patches. As succeeding rim levels are descended from the ridgetop, the seepage duration is reduced and the camas community usually changes from continuous patches to separated individuals within the adjacent bunchgrass communities. Occurrences of this community occur between 3,000 and 6,000 feet on southerly aspects with slopes average 40% (Johnson and Simon 1987).

MOST ABUNDANT SPECIES

Strata	Species
Herbaceous	<i>Camassia cusickii</i>

VEGETATION DESCRIPTION The Cusick's camas seep community contains 40-60% foliar cover of camas almost to the exclusion of other plants. Rock and gravel make up the remainder of site coverage. Frequently associated herbaceous species, generally in low cover, include, *Artemisia ludoviciana*, *Perideridia montana*, *Achillea millefolium*, *Penstemon venustus*, *Allium accuminatum*, and *Antennaria luzuloides* (Johnson and Simon 1987).

WILDLIFE VALUES Elk appear to relish the leaf tips and inflorescences of camas. Sites have been observed in Idaho and Oregon where elk have uniformly grazed camas patches while adjacent *Agropyron spicatum* communities were unused.

OTHER NOTEWORTHY SPECIES *Camassia cusickii* is considered a species of conservation concern in Idaho, where eight populations are known. The species is much more abundant, although very local, in Oregon.

ADJACENT COMMUNITIES This seep community occurs within a matrix of bunchgrass-dominated communities on the canyon slopes. The dominant bunchgrass is usually *Agropyron spicatum* (Johnson and Simon 1987).

CONSERVATION RANK G3 S1

SUCCESSION AND MANAGEMENT Cusick's camas seep stands are located in areas where past sheep grazing has resulted in adjacent bunchgrass communities that are in degraded ecological condition. Degraded camas sites contain greater abundance of *Achillea millefolium*, *Polygonum douglasii*, *Antennaria luzuloides*, and *Lomatium dissectum* (Johnson and Simon 1987).

Wild and domestic ungulates can readily damage these communities by disturbance of the soil when it is still saturated. Thus, sheep use before mid-July could be detrimental. Once the plants have dispersed seed and the seepage dries, grazing animals will have minimal impact on the site (Johnson and Simon 1987).

CLASSIFICATION COMMENTS Classification is based on 8 plots in Oregon (Johnson and Simon 1987).

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EDITION AUTHOR B. Moseley

Tentative Community Types

Alnus rhombifolia/Cornus sericea - Rarely in his community type descriptions does Miller (1976) mention red-osier dogwood as an associated understory species in white alder forests of Idaho. I sampled two plots along Sage Creek in the exclosure portion of the Hixon Sharptail site that had dogwood as the understory dominant. This site is at the upper elevation limits of white alder in the Snake River basin and the red-osier dogwood may be indicative of this. Less than a mile upstream the white alder stands petered out and are replaced by mountain alder. In fact, the alder in the plots appeared to be hybrid between *A. rhombifolia* and *A. incana*, although it was over 10 m tall.

A dense canopy of white alder occurs along the narrow, steep gradient valley bottom. Red-osier dogwood is the most common shrub in the understory, averaging 25% cover. *Philadelphus lewisii* and *Crataegus douglasii* were in both plots in low cover. Diversity and cover of graminoids and forbs were low under the dense canopy of alder and shrubs, with *Equisetum hymenale* being the most abundant. Sage Creek runs through a shallow canyon cut through basalt. The steep canyon sides have Douglas-fir stands on the north slopes and *Artemisia tridentata* var. *xericensis* on the south slopes. This community is expected to occur at other sites in west-central Idaho, near the upper elevational limits of white alder.

Betula occidentalis/Philadelphus lewisii - Sampled in Jump Creek, a tall gallery of water birch lines the creek that runs between the steep-walled canyons of rhyolite. The birch provides full canopy cover over the stream. Although Jump Creek is a spring creek, its channel is subject to high spring run-off and flash floods (such as during January 1997). As a consequence, the understory of this streamside community periodically gets scoured leaving it relatively species-poor with low vegetative cover. In contrast, the *Betula occidentalis*/Mesic forb community type occurs on adjacent terraces, above the scour zone. *Syringa* forms an open middle-canopy layer, while low-growing poison ivy dominates the ground layer.

This community occurs below 3,000 feet in elevation, along nearly one mile of Jump Creek immediately above the falls. More inventory is needed, but I believe other occurrences of this community type can be found at low elevations in the canyons of the Owyhee Front.

Prunus virginiana - Dense stands of tall (5+ m) chokecherry occur on stream terraces above high water in two sites, Cottonwood Creek and Little Jacks Creek. The Little Jacks Creek terraces had an open, grassy understory (described below), while the one terrace encountered in

Cottonwood Creek had a dense shrub and vine understory with few forbs and grasses. I've tentatively lumped this one plot from Cottonwood Creek in the *Prunus virginiana* community type described from eastern Idaho (Hall and Hansen 1997). The stand had a dense understory of shrubs and vines (*Ribes inerme*, *Clematis ligusticifolia*, *Rosa woodsii*, and *Cornus sericea*) and few forbs and grasses. In contrast with the next community, blue wildrye was the only grass present and only in trace amounts.

The bedrock in Cottonwood Creek is the Tuff of Little Jacks Creek, which is a densely welded, flow-layered rhyolytic tuff. The chokecherry community occurred largely on a cobble/gravel bars adjacent to the stream and to a lesser extent on a rocky toeslope of colluvium at the stream edge (Fisher 1997). The elevation was 4660 feet. This and the next community type probably occur elsewhere in the canyons of the Owyhee Plateau.

Prunus virginiana/Elymus glaucus - This community type was observed on five alluvial terraces along Little Jacks Creek. Although similar in landscape position to the previous community type, this type had an open understory dominated by blue wildrye. The size of the chokecherry on these bars is impressive, forming a canopy more than 9 m tall. Shrub cover was sparse, although *Clematis ligusticifolia* was still common, averaging 20% cover. In a degraded stand near the mouth of Rattlesnake Creek, which is accessible to cattle, blue wildrye appeared to have been replaced by Kentucky bluegrass.

The following soils information was collected by Helen Fisher (1997):

Alluvial terrace #1 (plot 97RM015). Height is between 1 and 1.5 m above summer water level. Soil description from bank cut.

A -- 0 to 6 cm; dark to very dark grey (5YR 3/1), black (5YR 2.5/1) moist, fine sandy loam; weakly cohesive, granular structure, friable; many very fine and fine roots; surface soil mixing via macropores; sand-sized black glass, charcoal.

C1 -- 6 to 20 cm; reddish grey (5YR 5/2), dark reddish brown (5YR 3/2) moist, stoney sand; non-cohesive; fine roots common; angular talus rocks.

C2 -- 20 - 150 cm; gravelly sand; rounded river rock gravel and cobble size.

Alluvial terrace #2 (plot 97RM0017). Soil description made from a 50 cm deep hole dug with hand trowel. Bench was about 20 m wide from bank edge to colluvial toeslope. Height is about 1.5 m above summer water level.

A -- 0 to 3 cm; dark brown (7.5YR 3/2), black (10YR2/1) moist, sandy loam.

Bt1 -- 3 to 10 cm; dark brown (7.5YR 3/2), black (10YR2/1) moist, silty loam.

Bt2 -- 10 to 13 cm; dark brown (7.5YR 3/2), black (10YR2/1) moist, silty clay loam.

C -- 13 to 50 cm; dark brown (7.5YR 3/2), black (10YR2/1) moist, sand.

This community has not been described in any publication I'm aware of. Further inventory and sampling of riparian chokecherry stands will probably reveal the true variation and relationships of the chokecherry community types in southwestern Idaho.

Salix lasiandra/Cornus sericea - Pacific willow is a common willow species in southwestern Idaho, usually occurring as widely scattered clumps, rarely as a dominance type. It occurs at five of my study sites (Appendix 4), but only at one did it dominate a riparian zone, the North Fork