

# WETLAND PLANT FACT SHEET

INTERAGENCY  
RIPARIAN/WETLAND PROJECT  
USDA-NRCS  
Plant Materials Center  
Aberdeen, Idaho 83210

## Common Threesquare (*Scirpus pungens*)

Common Threesquare is a perennial, rhizomatous wetland plant that is found at low to mid elevations in backwater areas of streams, ponds, reservoirs, and lake fringes. It is usually found in standing water about 10-15 cm deep. It can survive periods when the water table is more than 1 m below the surface. It grows on fine silty clay loams to sandy loams. It will tolerate alkaline and saline conditions as well as freshwater. It is generally found in mixed stands, often with Nebraska sedge, Creeping spikerush, and Baltic rush. Pure stands are not very common. This species spreads by seed and rhizome growth. Currently accepted name is *Schoenoplectus pungens* var. *pungens* (Vahl) Palla.

### DESCRIPTION:

**Habit** -- Perennial, rhizomatous wetland obligate. May reach 1.5-10 dm in height.

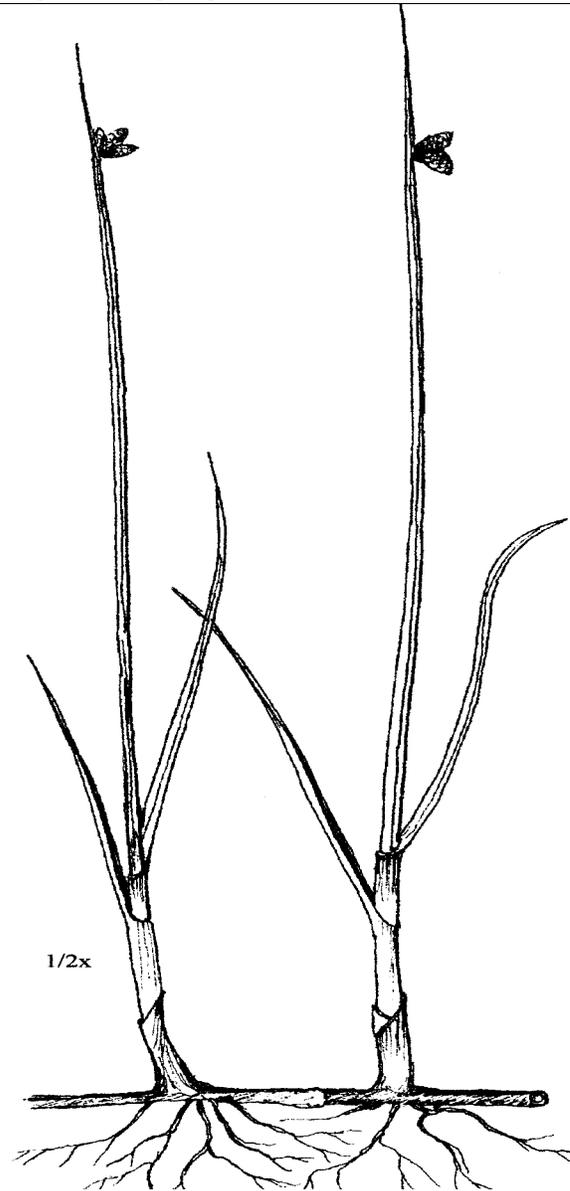
**Stems** -- Upright, triangular, and rarely concave.

**Leaves** -- Several all in the lower third of the stem, elongated, 2-4 mm wide.

**Spikelets** -- Lateral cluster of 1-7 sessile spikelets subtended by an involucre bract that appears to be a continuation of the stem. Scales are yellowish to reddish brown.

**Fruits**-- Brown lenticular achenes, 2.2-3.3 mm long with slender beaks. It has 4-6 bristles arising from the proximal end that are shorter than the achene.

**Distribution** -- Throughout the continental United States.



(Drawing by G. Bentrup)

## **SEED COLLECTION:**

Seeds ripens from late July through August. They are held a couple of months in the seedhead. High winds will cause a significant portion of the seeds to drop. Seeds may be collected by hand stripping them from the plant or by clipping the seedheads using a pair of hand shears. A power seed harvester may also be used.

## **CLEANING:**

A hammermill is used to break up the large debris and knock the seeds loose from the stem. Cleaning can be accomplished using a seed cleaner with a No. 7 top screen and a 1/20 in bottom screen. Screens should be sized so desired seeds will fall through and debris and weed seeds are removed. Air velocity should be adjusted so chaff is blown away. Air flow and screen size may require adjustment to optimize the cleaning process for given situation.

## **PROPAGATION:**

**Special procedures** -- This species is very difficult to germinate. Wide differences exist between populations. The germination rate may be enhanced by light scarification and wet prechilling the seeds in a mixture of water and sphagnum moss at 2°C for 30 days.

**Greenhouse** -- Seeds need light, moisture, and heat for germination. Place seeds on surface of soil and press in lightly to assure good soil contact. Do not cover seed. Soil should be kept moist. Greenhouse should be kept hot (32°-38°C). Germination should begin within a

few weeks. Maintain moisture until plants are to be transplanted.

**Wild transplants** -- Wild plants can be collected and transplanted directly into the desired site. As long as no more than 4 dm<sup>2</sup>, 13-15 cm deep, is removed from any 1 m<sup>2</sup> area, the hole will fill in within one growing season. Care should be taken not to collect plants from weedy areas as these weeds can be relocated to the transplant site. In addition, the hole left at the collection site may fill in with undesirable species.

## **ESTABLISHMENT AND MAINTENANCE OF STANDS:**

**Establishment** -- Planting plugs (either from the greenhouse or wild transplants) is the surest way to establish a new stand of this species. Plug spacing of 30-45 cm will fill in within one growing season. Soil should be kept saturated. It can tolerate 5-8 cm of standing water during the first growing season. Fluctuating the water level during the establishment period will increase spread. Water levels can be managed to enhance spread and to control weeds.

**Maintenance** -- It can tolerate up to 30-45 cm of standing water if the water level is fluctuated during the growing season. This species can tolerate periods of drought and total inundation. Water levels can be managed to either enhance or reduce spread as well as to control terrestrial weeds.

## **INSECT AND DISEASE PROBLEMS:**

These are generally not a problem. Aphids will feed on the stems, but will not kill the plant. If an insect or disease problem is encountered in the greenhouse, treat as you would for any other plant species.

## **WILDLIFE AND LIVESTOCK USES:**

Rarely grazed by livestock and big game. Forage palatability and production are poor. Waterfowl will eat the seeds and use the stands for nesting cover. Muskrats and geese eat the rootstocks and early spring growth. Muskrats use the shoots for building materials.

## **ANTICIPATED CONSERVATION USES:**

Erosion control, Constructed Wetland System applications, wildlife food and cover, wetland creations and restorations, and for increasing plant diversity in wetland and riparian communities. The above ground biomass will effectively protect shorelines from heavy wave action. Roots will stabilize shorelines and streambanks. The rhizomes form a matrix for many beneficial bacteria, making this plant an excellent choice for wastewater treatment.

## **RELEASED SELECTIONS:**

The Interagency Riparian/Wetland Plant Development Project released four performance tested ecotypes for areas within its service area in 1997. The following is a list of those Selected releases:

**Market Lake Selection of Common Threesquare** (*Scirpus pungens*), Accession Number 9057648, for Land Resource Region (LRR) B East from Market Lake Wildlife Management Area, just north of the town of Roberts, Jefferson County, Idaho.

**Fort Boise Selection of Common Threesquare** (*Scirpus pungens*), Accession Number 9057578, for Land Resource Region (LRR) B West from Fort Boise Wildlife Management Area, west of the town of Apple Valley, Canyon County, Idaho.

**Malheur Selection of Common Threesquare** (*Scirpus pungens*), Accession Number 9057610, for Land Resource Region (LRR) D North from Malheur National Wildlife Refuge, south of the town of Bums, Harney County, Oregon.

**Wayne Kirch Selection of Common Threesquare** (*Scirpus pungens*), Accession Number 9067642, for Land Resource Region (LRR) D South from Wayne Kirch Wildlife Management Area (previously known as the Scripps WMA), 63 miles south of Ely, Nye County, Nevada on Hwy 318.

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