GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Schismus barbatus***

Schismus barbatus 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Cyperales	Poaceae

Common name Mediterranean grass (English), common Mediterranean grass (English)

Synonym *Festuca barbata* , Loefl. ex L.

Similar species *Schismus arabicus*

Summary Schismus barbatus is invasive in the Mojave and Sonoran Deserts of the southwestern United States. However, this species also provides food for desert turtles and rodents. It is most common in disturbed areas of the deserts and becomes most abundant during years of favourable winter rains.

view this species on IUCN Red List

Species Description
Schismus barbatus is a tufted annual up to 40cm tall. The inflorescence is a narrow, erect, greenish-purple panicle (branched, cluster), produced in spring [in western United States].” Devender *et al.* (1997) describes *S. barbatus* as a cool-season annual. Wilken and Hannah (1998) describe *S. barbatus* as being a slow growing grass with smooth stems that ascend to somewhat grow on the ground. The leaves are alternate with irregular jagged edges. The stem is smooth for the most part with scattered soft hairs. The blades are narrowly linear, 5-10cm long, 0.5-2mm wide, and curled inward. The grass has dense infloresence 1-5cm long and ovate to elliptic in shape. Spikelets are 4-8mm long, becoming reddish, and are composed of 3-8 florets. Brooks (2000a) indicates that *S. barbatus* is so similar to *S. arabicus* physiognomically and in terms of the habitats it invades that the two species may have very similar ecological effects.

Notes
According to Devender *et al.* (1997), *S. arabicus* has been recognized as a subspecies of *S. barbatus*. Today they are considered separate species to most, although Brooks (2000a) notes that their ecological effects are likely to be very similar.

Lifecycle Stages
According to Devender *et al.* (1997), \"the first stems and leaves often spread out close to the ground, effectively excluding or preventing other ephemerals from sprouting.\" According to Wilken and Hannah (1998), flowering takes place from February to May, in California.

Uses
According to Wilken and Hannah (1998), \"*S. barbatus* has become an important component of the winter-early spring annual vegetation of the Mojave and Sonoran deserts, especially in disturbed or open areas among shrubs. Although low in nutritional quality, the leaves are utilized by desert toroises and the seeds are eaten by desert rodents.

Habitat Description
Schismus barbatus is a common weed of pastoral lands and disturbed sites, according to Randall (1998). Devender *et al.* (1997) describes the some preferred habitat features such as sandy soils, sandy flats, arroyos (dry bed of a small stream) and washes, interdune troughs, at the bases of larger dunes, and as an agricultural and urban weed.\" According to Wilken and Hannah *S. barbatus* has been reported from roadsides, waste areas, fields, and dry river beds. *S. barbatus* is more common in semi-arid regions whereas *S. arabicus* is more common in arid regions (Brooks 2000a).

Reproduction
According to Devender *et al.* (1997), years of favourable winter rains allow the grasses to become abundant forming extensive, dense carpets. Wilken and Hannah (1998) state that *S. barbatus* reproduces by self-pollination. \"Seeds stored under dry conditions germinate readily only after heat treatment, consistent with its desert habitat, but germination is enhanced by dark relatively warm conditions.\"

General Impacts
According to Devender *et al.* (1997), *S. barbatus*, along with several other invasives, potentially causes the most ecological damage to the Sonoran Desert Region. *S. barbatus* is described \"to spread close to the ground preventing other ephemerals from sprouting.\" Alien plants such as Schismus spp. can alter the structure of native plant communities, reducing biomass and species richenss of natives (Brooks 2000b). Alien annual grasses in particular can facilitate the spread of fire (Brooks 1999), and contribute to increased fire frequency where it was historically in frequent (Brooks and Esque 2002, Brooks and Pyke 2001) In the Mojave Desert, biomass of alien annual plants is negatively correlated with biomass and species richness of native annuals, even when potential covarying factors such as disturbance and soil nutrient levels are accounted for. Years of competition from these grasses may reduce the seed banks of native annuals, possibly causing fundamental changes in annual plant community structure and food web dynamics.\" Wilken and Hannah (1998) state that *S. barbatus* is not considered a noxious weed in agricultural or horticultural practices.

Management Info
Physical: *S. barbatus* is difficult to control due to its tendency to carpet the ground and produce large amounts of small seeds early in the growing season (Brooks 2000a). Although fire and livestock grazing may temporarilly reduce its biomass, in the long run it promotes its dominance (Brooks 2000a, 2002).
Chemical: Herbicides such as glyphosate can be effective, but application is difficult due to the small leaf area (Brooks 2000a).

Principal source: *Schismus arabicus Nees (Poaceae) Mediterranean Grass*(Wilken and Hannah, 1998)
Exotic Plants in the Sonoran Desert Region, Arizona and Sonora(Devender *et al.*, 1997)

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Matt Brooks, United States Geological Survey, Western Ecological Resarch Center, Las Vegas Field Station

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ALIEN RANGE

[1] AFRICA
[1] ECUADOR
[1] AUSTRALIA
[8] UNITED STATES

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Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.
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Summary: This page is a compiled report on *S. arabicus* and *S. barbatus*. It includes information on description, distribution, biology, habitat, and states the lack of control measures available.
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