Washington Invasive Ranking System

Washington Natural Heritage Program

Schedonorus arundinaceus (Tall Fescue)

Assessed by

Regina Johnson (Assistant Natural Areas Ecologist, Westside, Washington Dept. of Natural Resources) 21 November 2024 (WIRS Version 1.5)

Ecological Impact Rank: **Moderate** (51) Confidence: **High** (83)

Management Difficulty Rank: Moderate (54) Confidence: High (80)

Biological Characteristics of Invasiveness: High (90) Confidence: Moderate (58)

Concern Related to Distribution and Abundance: High (73)

Confidence: Moderate (60)



Photo Credit: David Giblin 2023, used under Creative Commons license (Burke Herbarium, University of Washington, 2024).

Ranking Notes

Rapid assessment only, based primarily on professional expertise.

Legal Listings

Washington State Weed Board: No

Washington Invasive Species Council: No

Section 1: Distribution and Abundance

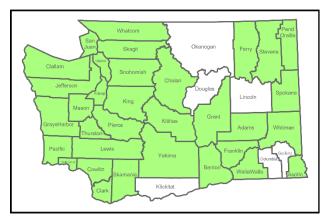


Figure 1. Distribution of counties where *Schedonorus* arundinaceus has been documented in Washington State (CPNWH, 2024; EDDMapS, 2024; iNaturalist Community, 2024).

Q1: Current Range Size in Washington

Rating: High

Confidence: High

Schedonorus arundinaceus is documented in 85% of counties in Washington State (CPNWH, 2024; EDDMapS, 2024; iNaturalist Community, 2024).

<u>Source</u>: Professional expertise, Herbarium records and other observations



Q2: Current Trend in Total Range

Rating: Moderate

Confidence: Moderate

Source: Professional expertise

Q3: Proportion of Potential Range Currently Unoccupied

Rating: Low

Confidence: Moderate

Source: Professional expertise

Q4: Local Range Expansion or Change in

Abundance

Rating: Moderate

Confidence: Moderate

Source: Professional expertise

Q5: Diversity of Ecosystems Invaded

Ecosystem types: Grassland & Shrubland

Rating: Low

Confidence: Moderate

Source: Professional expertise

Section 2: Biological Characteristics

Q6: Aggressive Mode of Reproduction

Rating: Yes

Confidence: Moderate

Source: Professional expertise

Q7: Innate Potential for Long-Distance Dispersal

Rating: Unknown

Confidence: Not Rated

Source:

Q8: Potential to be Spread by Human Activities

Rating: Yes

Confidence: High

Source: Professional expertise

Q9: Allelopathy

Rating: Yes

Confidence: Moderate

Research indicates that *Schedonorus arundinaceus* is allelopathic (Hughes, 1987). Closely related *S. pratensis* also produces allelopathic chemicals

(Hughes, 1987).

Source: Informal publication

Q10: Competitive for Limiting Abiotic Factors

Rating: Yes

Confidence: High

Source: Professional expertise

Q11: Growth Form

Rating: Yes

Confidence: Moderate

Source: Professional expertise

Q12: Germination Requirements

Rating: Unknown

Confidence: Not Rated

Source:

Q13: Invasiveness of Other Plants in Genus

Rating: Yes

Confidence: High

Schedonorus pratensis is introduced in the Pacific Northwest and S. giganteus is found in northeastern North America (Darbyshire, 2021). Both exhibit invasive traits, though neither are commonly listed as invasive species, perhaps because of their value as

pasture grasses.

Source: Professional expertise, Flora of North

America treatment

Q14: Shade Tolerance

Rating: Low/Insignificant

Confidence: Moderate



Schedonorus arundinaceus

Source: Professional expertise

O15: Disturbance Tolerance

Rating: Yes

Confidence: High

Source: Professional expertise

Q16: Propagule Persistence

Rating: Unknown

Confidence: Not Rated

Source: Professional expertise

Q17: Palatability

Rating: Yes, plant is unpalatable

Confidence: Moderate

Some populations are palatable, while others are not, depending on endophytes. It's commonly planted as a pasture grass but with endophyte-free seed. Feral populations may be endophyte free or not.

Source: Professional expertise

Section 3: Ecological Impact

Q18: Impact on Ecosystem Abiotic Processes

Abiotic Processes: Geomorphology, Nutrient

dynamics, Light availability

Rating: Moderate Confidence: High

Source: Professional expertise

Q19: Impact on Ecosystem Structure

Rating: Moderate

Confidence: High

Schedonorus arundinaceus does not just cause changes in structure of grasslands-where it was planted for pasture, it is very difficult to re-establish trees and shrubs, and it excludes woody plant recruitment unless there is a major investment in physical removal.

Source: Professional expertise

Q20: Impact on Ecosystem Composition

Rating: High

Confidence: High

Source: Professional expertise

Q21: Impact on Particular Native Species

Rating: Insignificant

Confidence: Moderate

Source: Professional expertise

Q22: Observed Ability to Invade Undisturbed

Ecosystems

Rating: Insignificant

Confidence: Moderate

Source: Professional expertise

Q23: Observed Ability to Invade Naturally

Disturbed Ecosystems

Rating: Yes

Confidence: High

Source: Professional expertise

Section 4: Management Difficulty

Q24: General Management Difficulty

Rating: Moderate

Confidence: High

Source: Professional expertise

Q25: Minimum Time Commitment

Rating: Moderate

Confidence: High

In order to reforest a tall fescue pasture, one must control the tall fescue until trees grow above it, which

can take a few years.

Source: Professional expertise



Q26: Impacts of Management on Native Species

Rating: Low

Confidence: Moderate

Impacts of management on native species are generally low, though this may be because there is often little native community remaining in areas with tall fescue.

Source: Professional expertise

Q27: Inaccessibility of Invaded Areas

Rating: Low

Confidence: Moderate

Source: Professional expertise

Q28: Sociopolitical Implications of Management

Rating: Moderate/Low

Confidence: High

Source: Professional expertise

Additional Comments

None

References

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