Washington Invasive Ranking System

Washington Natural Heritage Program

Dianthus armeria (Deptford Pink)

Assessed by
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Ecological Impact Rank: **Insignificant** (16)	Confidence: **Moderate** (58)
Management Difficulty Rank: Insignificant (0)	Confidence: High (100)
Biological Characteristics of Invasiveness: Insignificant (27)	Confidence: Moderate (63)
Concern Related to Distribution and Abundance: Moderate (56)	Confidence: Moderate (60)

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Ranking Notes

Dianthus armeria was assessed by multiple individuals, though both assessors conducted rapid assessments based largely on professional expertise and with minimal literature review. Range of assessor ratings is provided in parentheses following the final assigned rating.

Legal Listings

Washington State Weed Board: No

Washington Invasive Species Council: No

Section 1: Distribution and Abundance

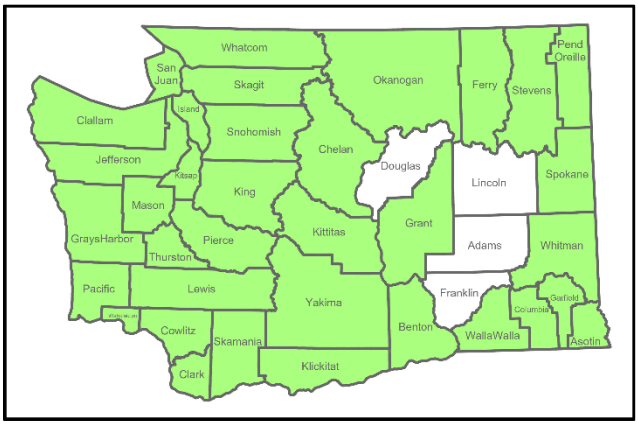

Figure 1. Distribution of counties where *Dianthus armeria* has been documented in Washington State (CPNWH, 2024; EDDMapS, 2024; iNaturalist Community, 2024).

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Q1: Current Range Size in Washington

Rating: High

Confidence: High

This species has been documented in 90% of counties in Washington (CPNWH, 2024; EDDMapS, 2024; iNaturalist Community, 2024).

Source: Herbarium records and other observations

Q2: Current Trend in Total Range

Rating: Low

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: Low

Confidence: Moderate

Source: Professional expertise

Q5: Diversity of Ecosystems Invaded

Ecosystem types: Forest & Woodland, Grassland & Shrubland

Rating: Low

Confidence: Moderate

Source: Professional expertise

Section 2: Biological Characteristics

Q6: Aggressive Mode of Reproduction

Rating: No

Confidence: Moderate

Dianthus armeria produces approximately 400 seeds per plant (Wells, 1967) and does not otherwise have an aggressive mode of reproduction.

Source: Published research, Professional expertise

Q7: Innate Potential for Long-Distance Dispersal

Rating: No

Confidence: Low

Seeds don’t appear to have adaptations for wind or animal dispersal.

Source: Professional expertise

Q8: Potential to be Spread by Human Activities

Rating: Yes

Confidence: Moderate

Source: Professional expertise

Q9: Allelopathy

Rating: No

Confidence: Moderate

This species does not appear to be allelopathic and doesn't exclude other plants.

Source: Professional expertise

Q10: Competitive for Limiting Abiotic Factors

Rating: No

Confidence: Moderate

Source: Professional expertise

Q11: Growth Form

Rating: No

Confidence: High

Source: Professional expertise

Q12: Germination Requirements

Rating: No

Confidence: High

Dianthus armeria requires soil disturbance and high light levels to germinate (Baskin & Baskin, 2001).

Source: Published research

Q13: Invasiveness of Other Plants in Genus

Rating: No

Confidence: Moderate

There are at least two other introduced *Dianthus* species in the state (Burke Herbarium, University of Washington, 2024), but neither are commonly considered to be invasive.

Source: Professional expertise, Herbarium records

Q14: Shade Tolerance

Rating: Low/Insignificant

Confidence: High

Dianthus armeria is adapted to ecosystems with abundant direct sunlight (Wilson, 1999). One study demonstrated reduced seed production and seed mass in shaded conditions (Nightingale, 2007).

Source: Published research, Professional expertise

Q15: Disturbance Tolerance

Rating: Yes

Confidence: Moderate

This species is well-adapted to disturbed areas (Wilson, 1999; Stroh, 2014).

Source: Published research, Informal publication, Professional expertise

Q16: Propagule Persistence

Rating: Yes

Confidence: High

Seeds may remain dormant for at least 40 years within the native range of this species (Wells, 1967).

Source: Published research, Professional expertise

Q17: Palatability

Rating: No, plant is palatable

Confidence: Moderate

Grazing is considered a threat within its native range, where *Dianthus armeria* is commonly considered Endangered or Vulnerable, so it is likely to be palatable (Wilson, 1999).

Source: Published research, Professional expertise

Section 3: Ecological Impact

Q18: Impact on Ecosystem Abiotic Processes

Abiotic Processes: None listed

Rating: Insignificant

Confidence: Moderate

Source: Professional expertise

Q19: Impact on Ecosystem Structure

Rating: Insignificant

Confidence: Moderate (range Moderate - High)

Source: Professional expertise

Q20: Impact on Ecosystem Composition

Rating: Insignificant

Confidence: Moderate (range Moderate - High)

This species might use nutrients that native species also use, but the impact appears minor.

Source: Professional expertise

Q21: Impact on Particular Native Species

Rating: Insignificant

Confidence: High

Source: Professional expertise

Q22: Observed Ability to Invade Undisturbed Ecosystems

Rating: Low (range Low - Moderate)

Confidence: High (range Moderate - High)

Source: Professional expertise

Q23: Observed Ability to Invade Naturally Disturbed Ecosystems

Rating: Yes

Confidence: High (range Moderate - High)

This species is frequently observed in disturbed, ruderal ecosystems such as powerline corridors.

Source: Professional expertise

Section 4: Management Difficulty

Q24: General Management Difficulty

Rating: Insignificant

Confidence: High

This species is rarely a target for control as it is not considered invasive by most practitioners.

Source: Professional expertise

Q25: Minimum Time Commitment

Rating: Insignificant

Confidence: High

Source: Professional expertise

Q26: Impacts of Management on Native Species

Rating: Insignificant

Confidence: High

Source: Professional expertise

Q27: Inaccessibility of Invaded Areas

Rating: Insignificant

Confidence: High

Source: Professional expertise

Q28: Sociopolitical Implications of Management

Rating: Insignificant

Confidence: High

Source: Professional expertise

Additional Comments

None

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