

Palouse Prairie

Classification and Conservation of a Disappearing Ecosystem

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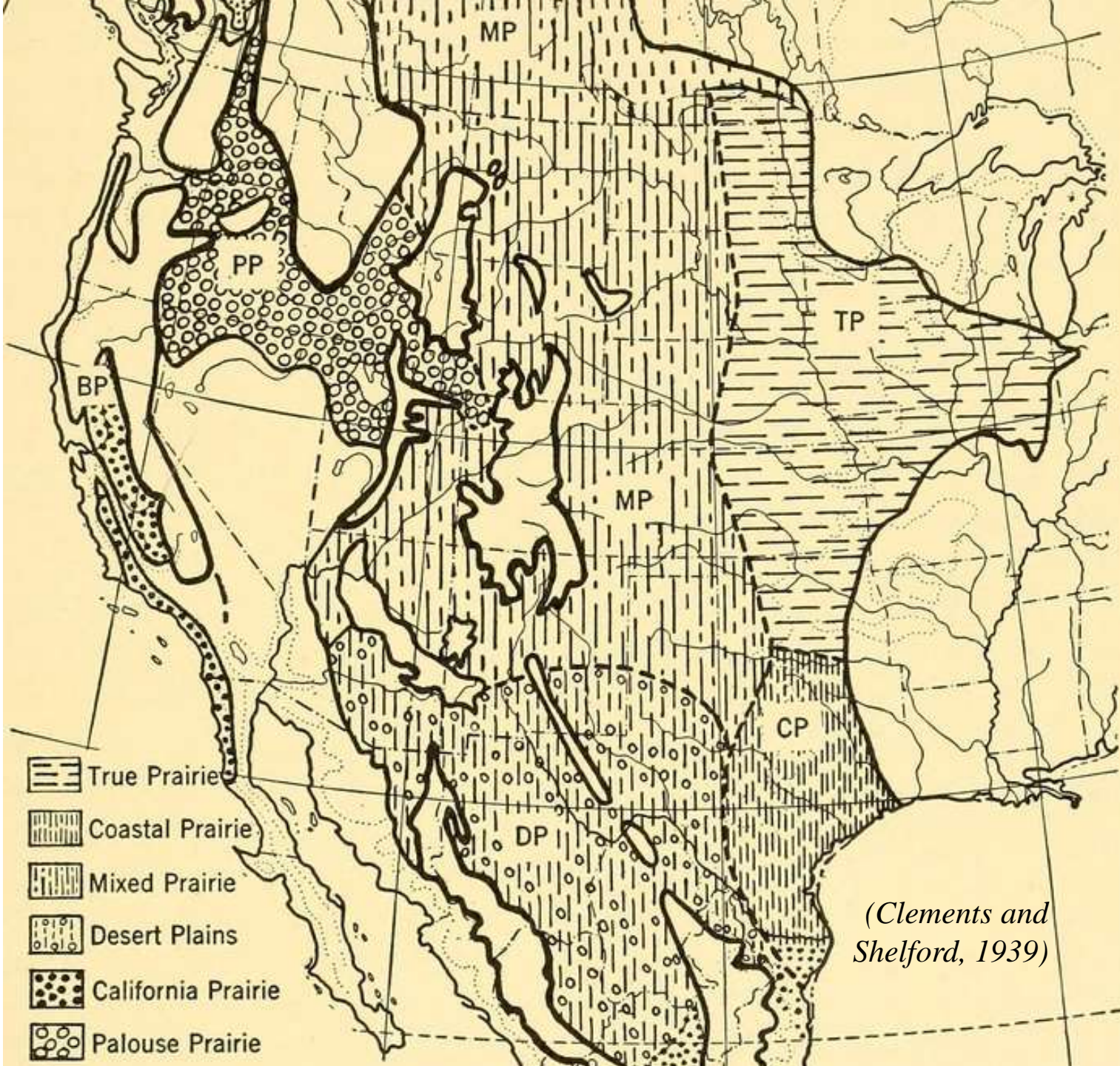


Photo by Joe Rocchio



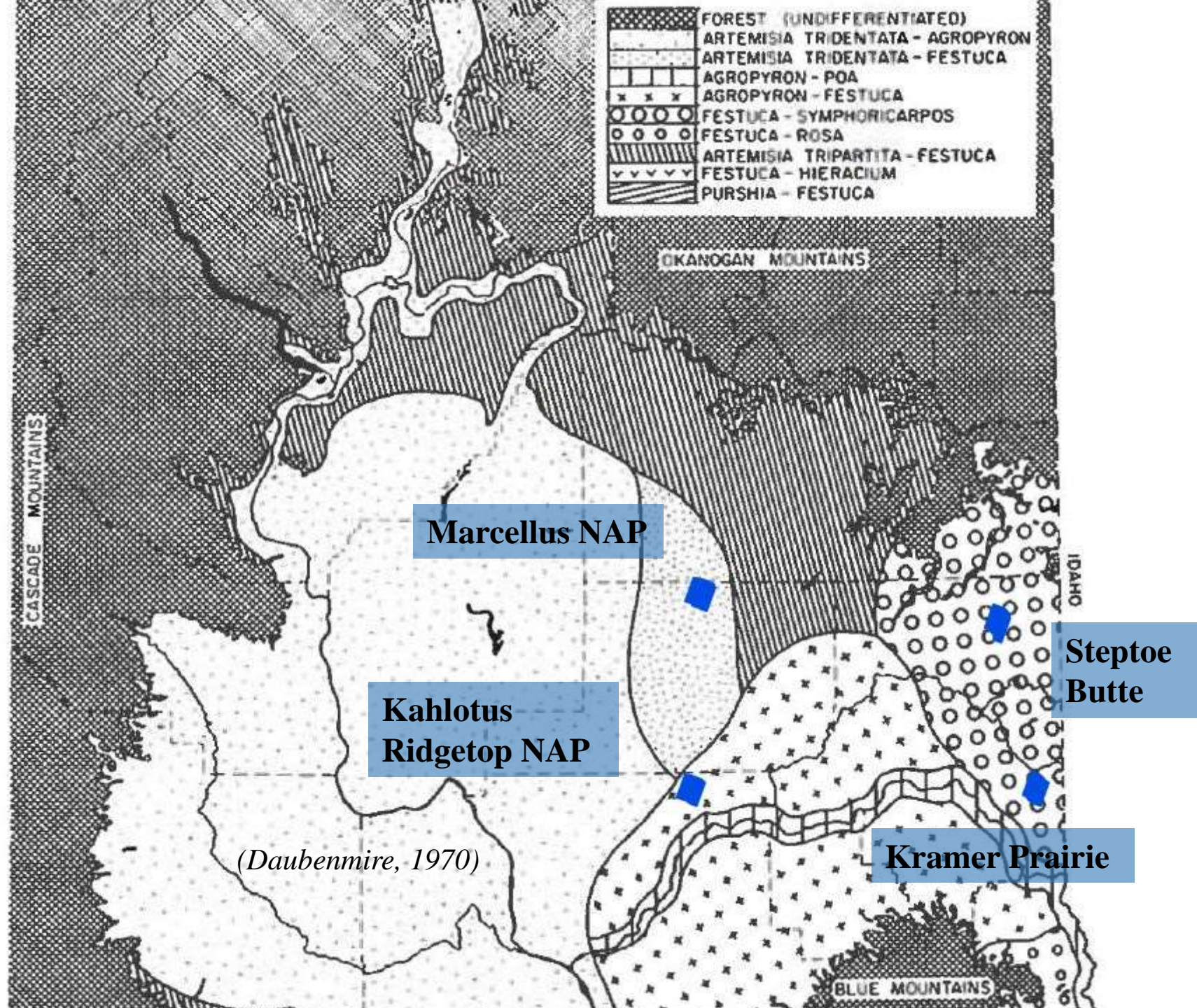
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(Clements and Shelford, 1939)

	FOREST (UNDIFFERENTIATED)
	ARTEMISIA TRIDENTATA - AGROPYRON
	ARTEMISIA TRIDENTATA - FESTUCA
	AGROPYRON - POA
	AGROPYRON - FESTUCA
	FESTUCA - SYMPHORICARPOS
	FESTUCA - ROSA
	ARTEMISIA TRIPARTITA - FESTUCA
	FESTUCA - HIERACIUM
	PURSHIA - FESTUCA



Marcellus NAP

Kahlotus Ridgetop NAP

Kramer Prairie

Steptoe Butte

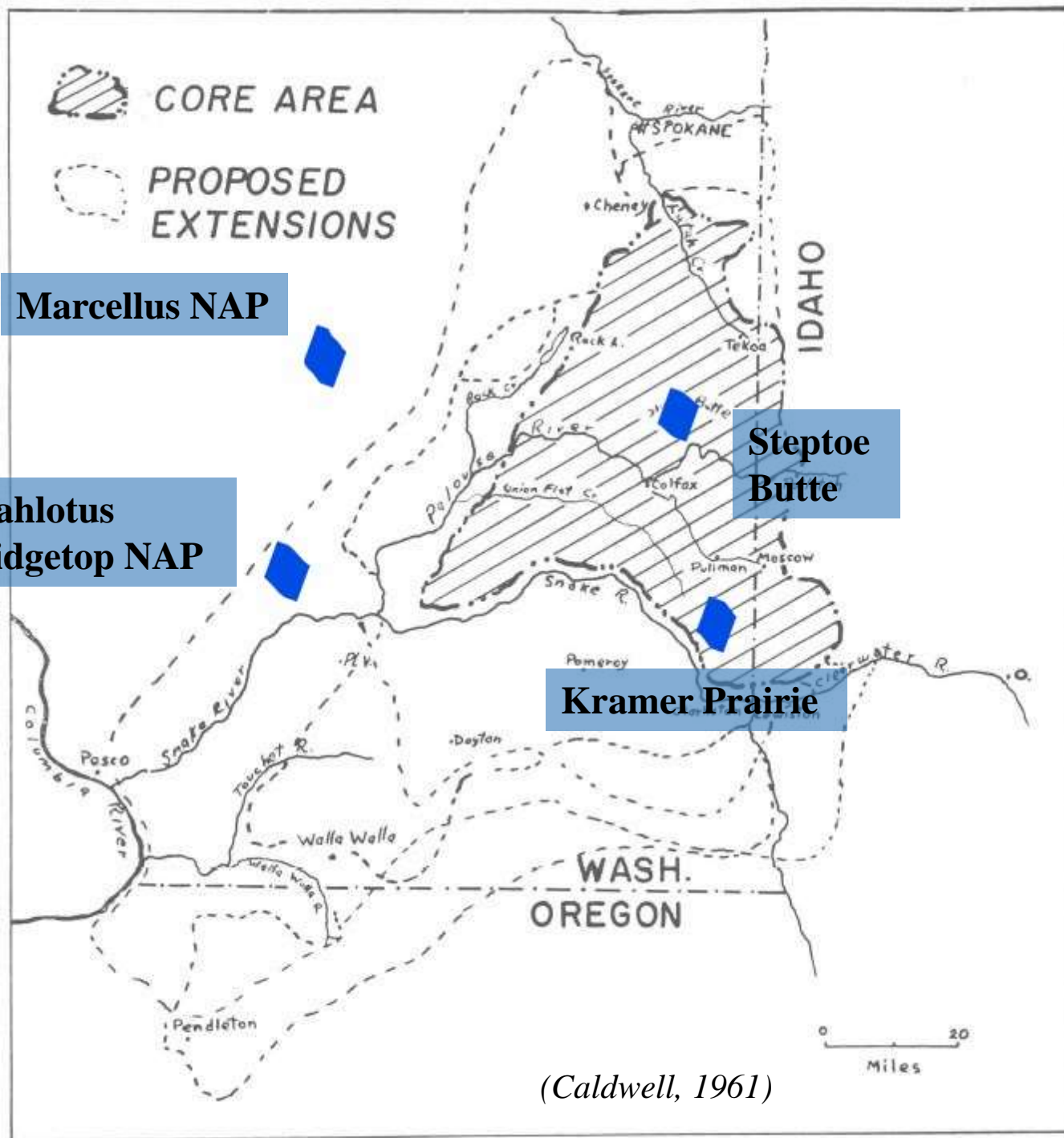
(Daubenmire, 1970)

CASCADE MOUNTAINS

OKANOGAN MOUNTAINS

BLUE MOUNTAINS

IDAHO



(Caldwell, 1961)

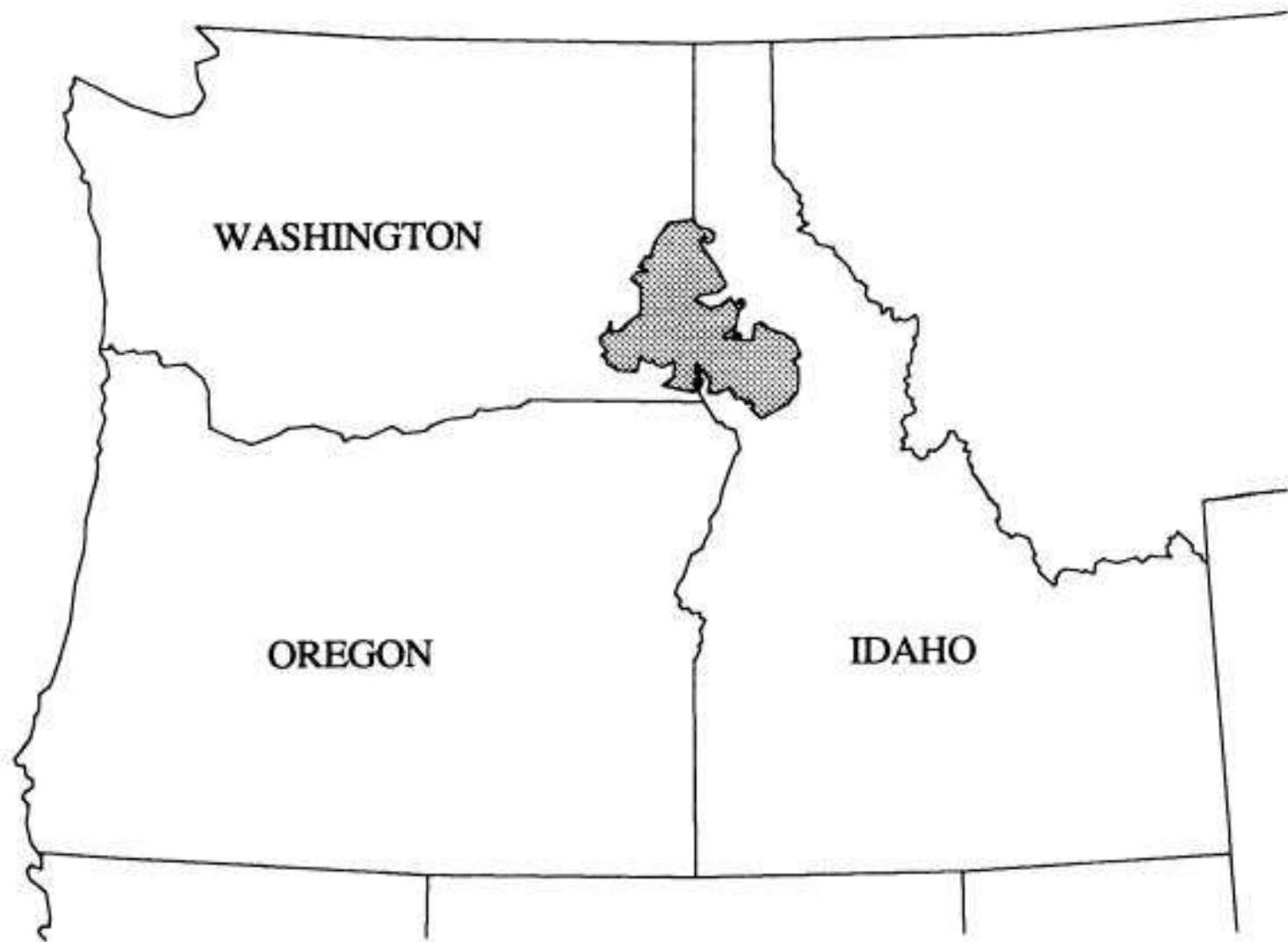
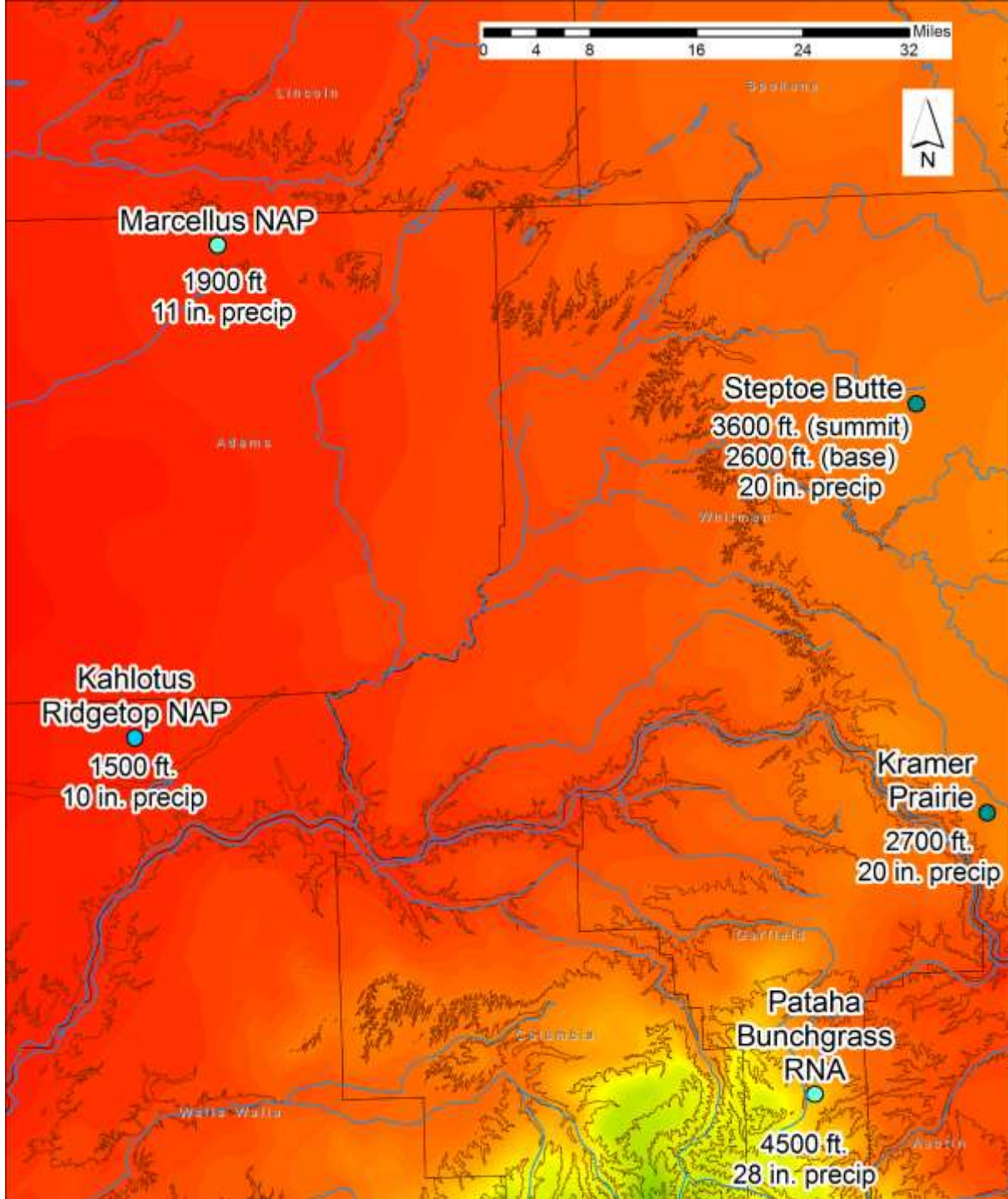


Fig. 1. The Palouse bioregion (Black et al., 1998).





*Precip =
1981-2010 Annual
Average*

Inter-Mountain Basins Big Sagebrush Steppe

Artemisia tridentata / *Festuca idahoensis* Shrub
Grassland (G4Q/S3)

Ecological System

USNVC Plant
Association

Marcellus Shrub Steppe Natural Area Preserve (DNR)



Columbia Basin Palouse Prairie

Pseudoroegneria spicata - *Festuca idahoensis*
Palouse Grassland (G1/S1)

Kahlotus Ridgetop Natural Area Preserve (DNR)

Photo by Joe Rocchio



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Columbia Basin Foothill and Canyon Dry Grassland

Pseudoroegneria spicata - *Festuca idahoensis* Canyon
Grassland (G3/S2)



Photo by Joe Rocchio



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Northern Rocky Mountain Lower Montane, Foothill and Valley Grassland

Festuca idahoensis – *Pseudoroegneria spicata* Grassland (G4/S2)

Pataha Bunchgrass Research Natural Area (USFS)

Photo by Joe Rocchio



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Columbia Basin Palouse Prairie

Festuca idahoensis – *Symphoricarpos albus*
Grassland (G1/S1)

Kramer Prairie Ecological Reserve (WSU)

Photo by Joe Rocchio



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Columbia Basin Palouse Prairie

Festuca campestris – *Festuca idahoensis* –
Geranium viscosissimum Grassland (G3?/S1)

Steptoe Butte Proposed Natural Area

Photo by Joe Rocchio



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Ecological System



Columbia Basin Palouse Prairie



Northern Rocky Mountain
Lower Montane, Foothill and
Valley Grassland

US National Vegetation Classification

G273 Central Rocky Mountain Lower Montane, Foothill & Valley Grassland

A3986 *Festuca campestris* - *Festuca idahoensis* Mesic Grassland Alliance

Festuca campestris - *Festuca idahoensis* - *Geranium viscosissimum* Grassland (present in both systems)

Festuca campestris - (*Festuca idahoensis*) - *Achnatherum richardsonii* Grassland

Festuca campestris - *Festuca idahoensis* Grassland

A3987 *Festuca idahoensis* - *Pseudoroegneria spicata* - *Poa secunda* Dry Grassland Alliance

Pseudoroegneria spicata - *Poa secunda* Grassland

Festuca idahoensis - *Eriogonum heracleoides* Grassland

Festuca idahoensis - *Hieracium cynoglossoides* Grassland

Festuca idahoensis - *Pseudoroegneria spicata* Grassland

Lomatium cous - *Poa secunda* Grassland

A3988 *Festuca idahoensis* - *Pseudoroegneria spicata* - *Pascopyrum smithii* Mesic Grassland Alliance

Festuca idahoensis - *Koeleria macrantha* Grassland (present in both systems)

Festuca idahoensis - *Symphoricarpos albus* Grassland

Rosa nutkana - *Festuca idahoensis* Grassland

A3989 *Festuca idahoensis* - *Pseudoroegneria spicata* Palouse Grassland Alliance

Hesperostipa comata - *Poa secunda* Grassland

Pseudoroegneria spicata - *Festuca idahoensis* Palouse Grassland

USORR Exp 9 Surveys 47449 Parallels

General Report Plate LIX



*“Source of the Palouse” (1854)
By John Mix Stanley (1814-1872)
After Gustav Sohon (1825-1903)*

66

Source of the Palouse



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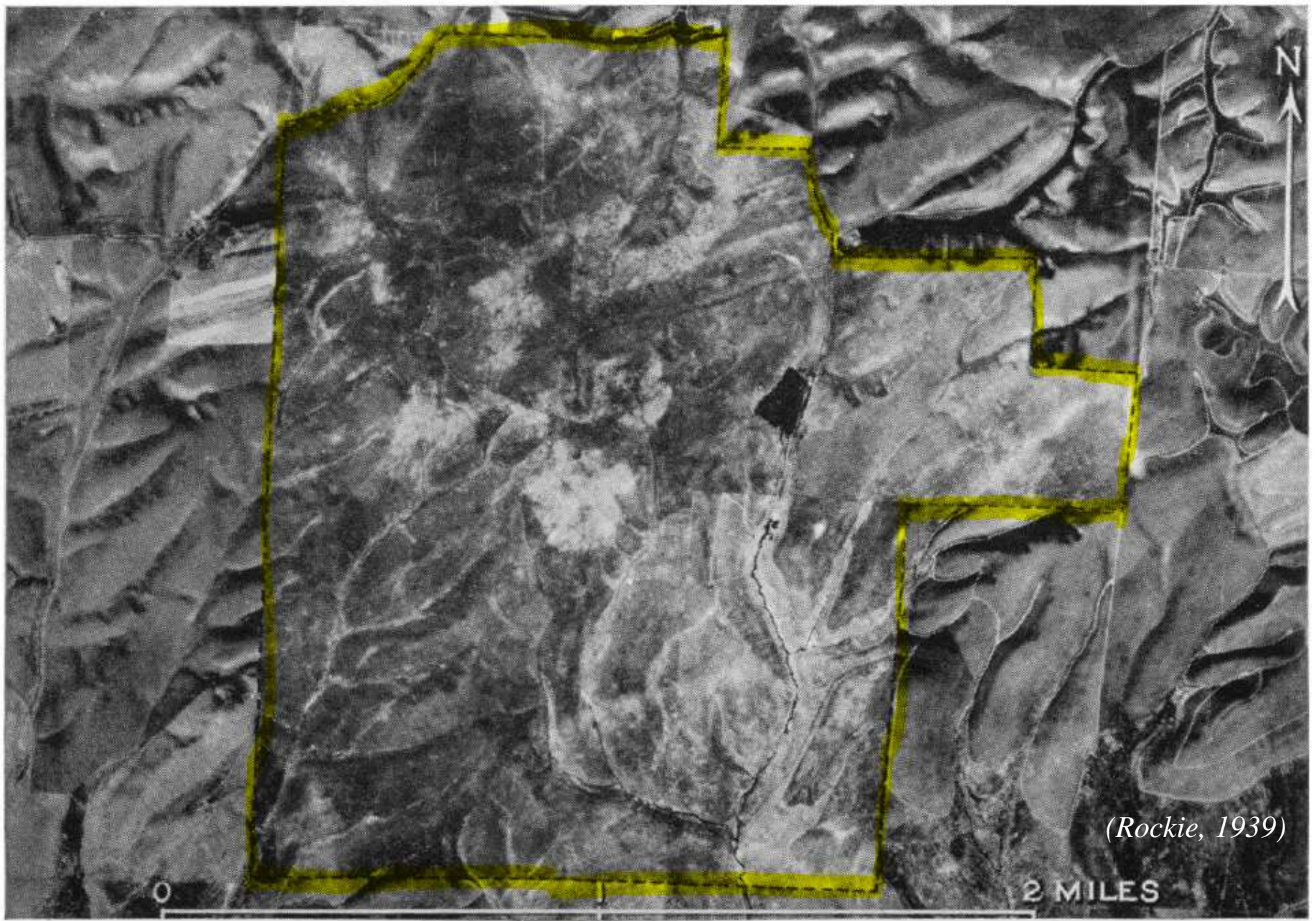
(Weaver, 1917)





(Rockie, 1939)





(Rockie, 1939)





From the road



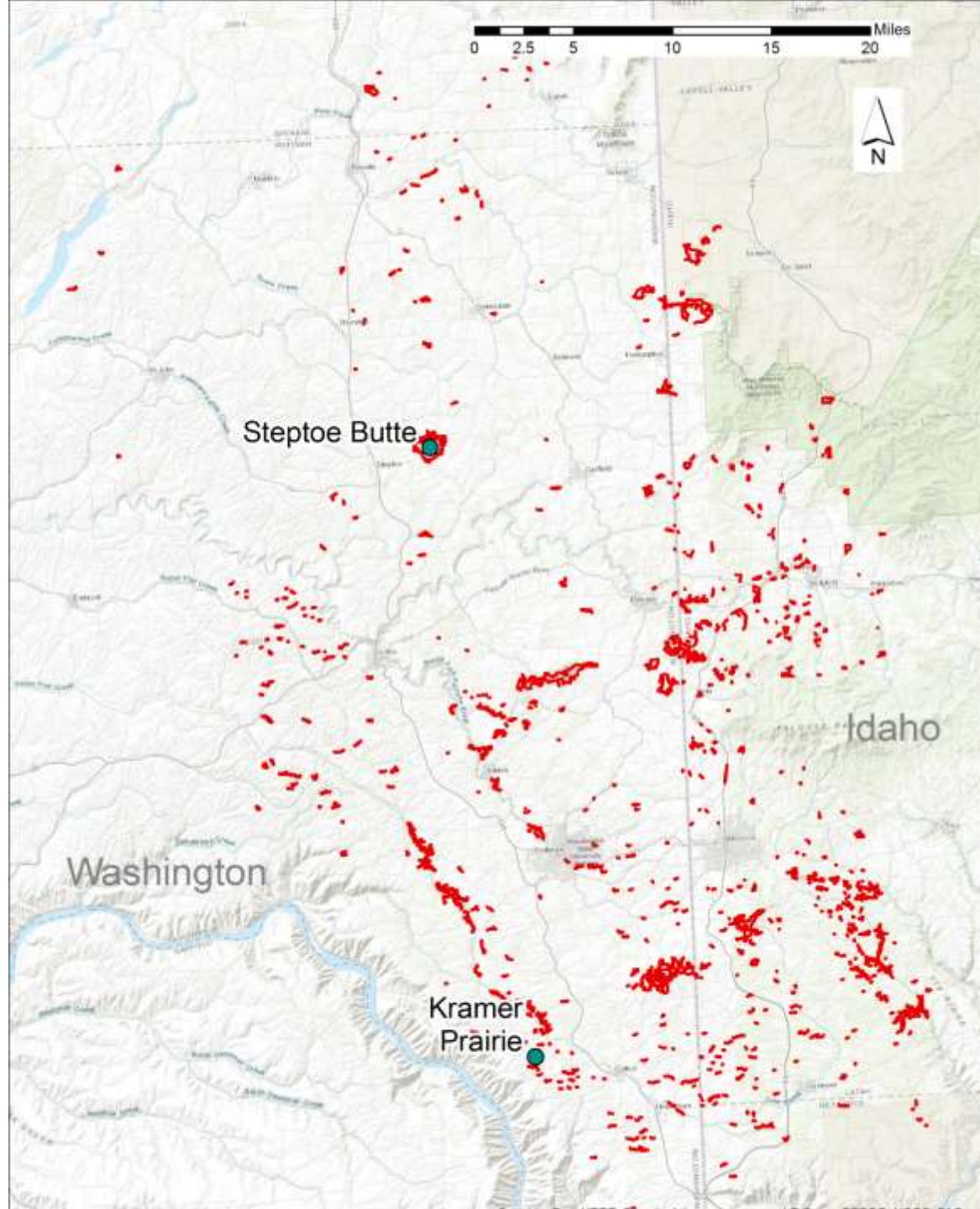
From the air



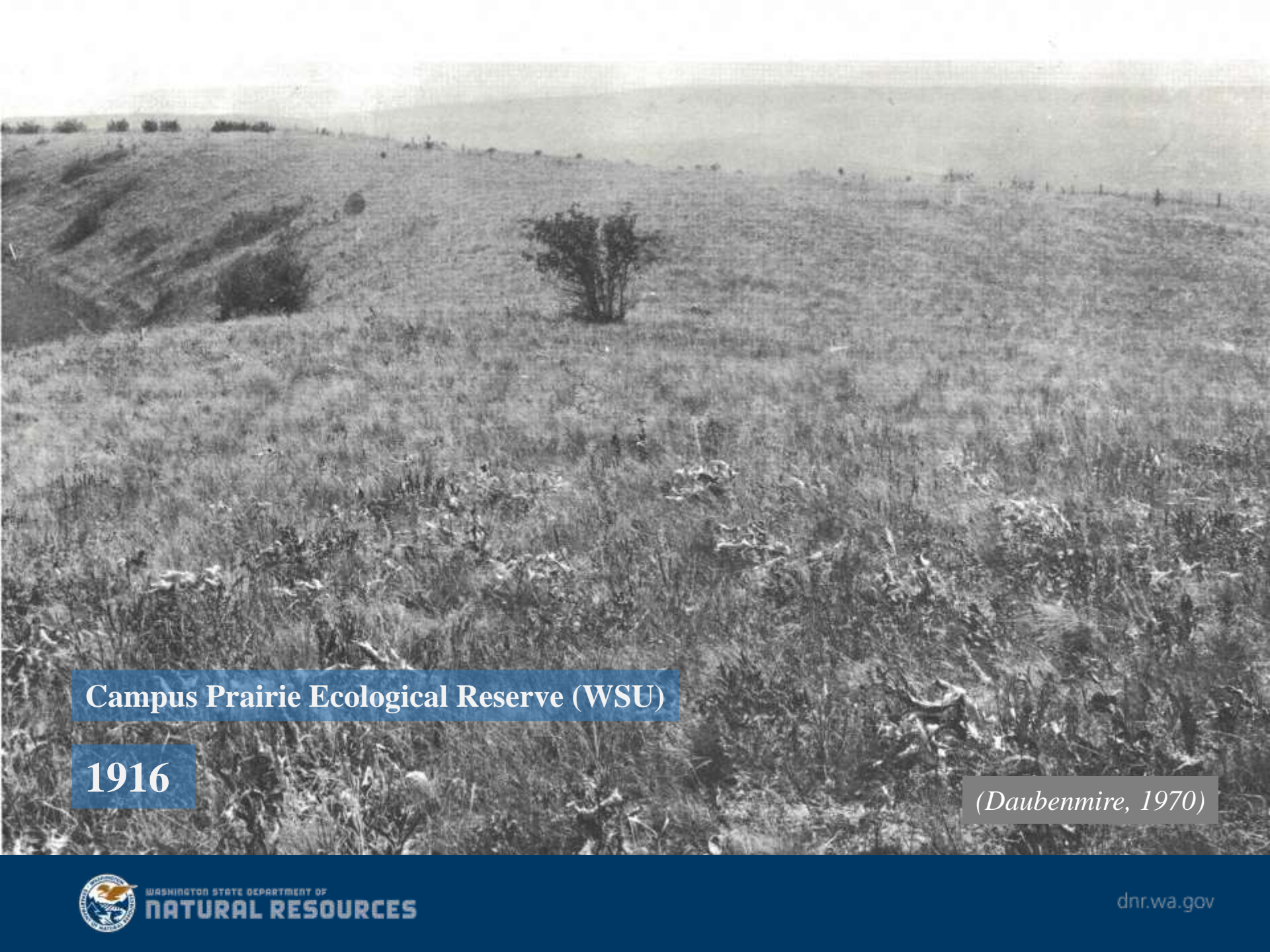


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*(Looney, 2007;
Arnett, 2009)*



Campus Prairie Ecological Reserve (WSU)

1916

(Daubenmire, 1970)





Campus Prairie Ecological Reserve (WSU)

1939

(Daubenmire, 1970)





Campus Prairie Ecological Reserve (WSU)

1968

(Daubenmire, 1970)





Campus Prairie Ecological Reserve (WSU)

1980

Photo by Rex Crawford





Campus Prairie Ecological Reserve (WSU)

2008

Photo by Joe Rocchio



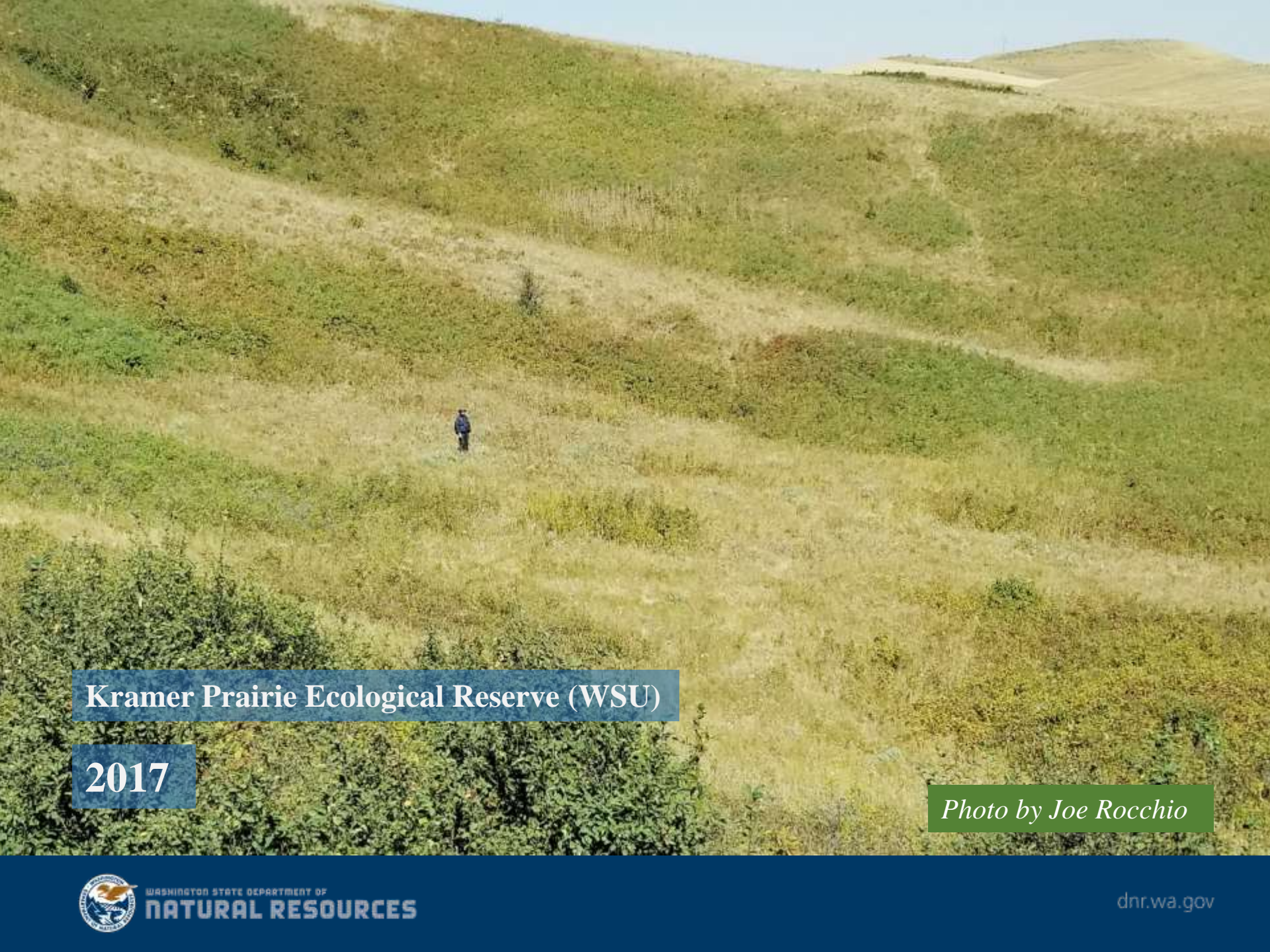


Kramer Prairie Ecological Reserve (WSU)

1958

(Daubenmire, 1970)





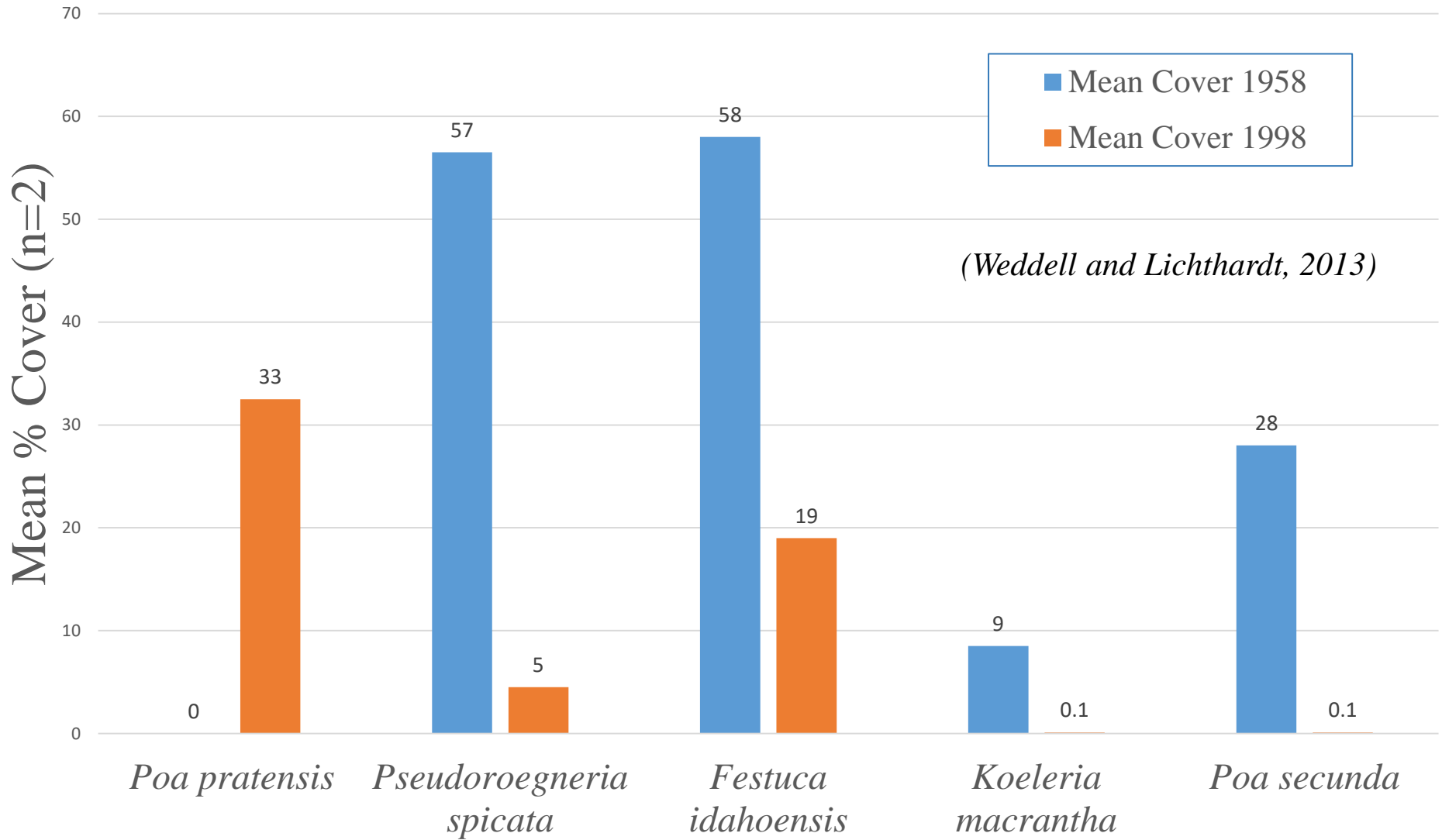
Kramer Prairie Ecological Reserve (WSU)

2017

Photo by Joe Rocchio



Changes in Dominant Graminoid Cover at Kramer Prairie



Endemics and Near-Endemics of the Palouse



Calochortus nitidus

Photo by Walt Fertig

	Conservation Status Rank
<i>Astragalus arrectus</i>	G2G4/S2
<i>Astragalus riparius</i>	G2/S2
<i>Calochortus nitidus</i>	G3/S1
<i>Cirsium brevifolium</i>	G3/SNR
<i>Pyrrocoma liatrifomis</i>	G2/S2
<i>Pyrrocoma scaberula</i>	G2/S1
<i>Rubus nigerrimus</i>	G2/S2
<i>Silene spaldingii</i>	G2/S2
<i>Symphyotrichum jessicae</i>	G2/S1S2
<i>Tragopogon mirus</i>	GNA/S2
<i>Trifolium douglasii</i>	G2/S1



Columbia Basin Foothill Riparian Woodland and Shrubland

(Populus tremuloides) / Crataegus douglasii / Heracleum maximum Wet Shrubland (G1/S1)

Steptoe Butte Proposed Natural Area



Driloleirus americanus

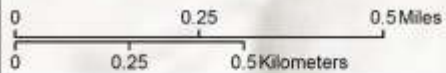
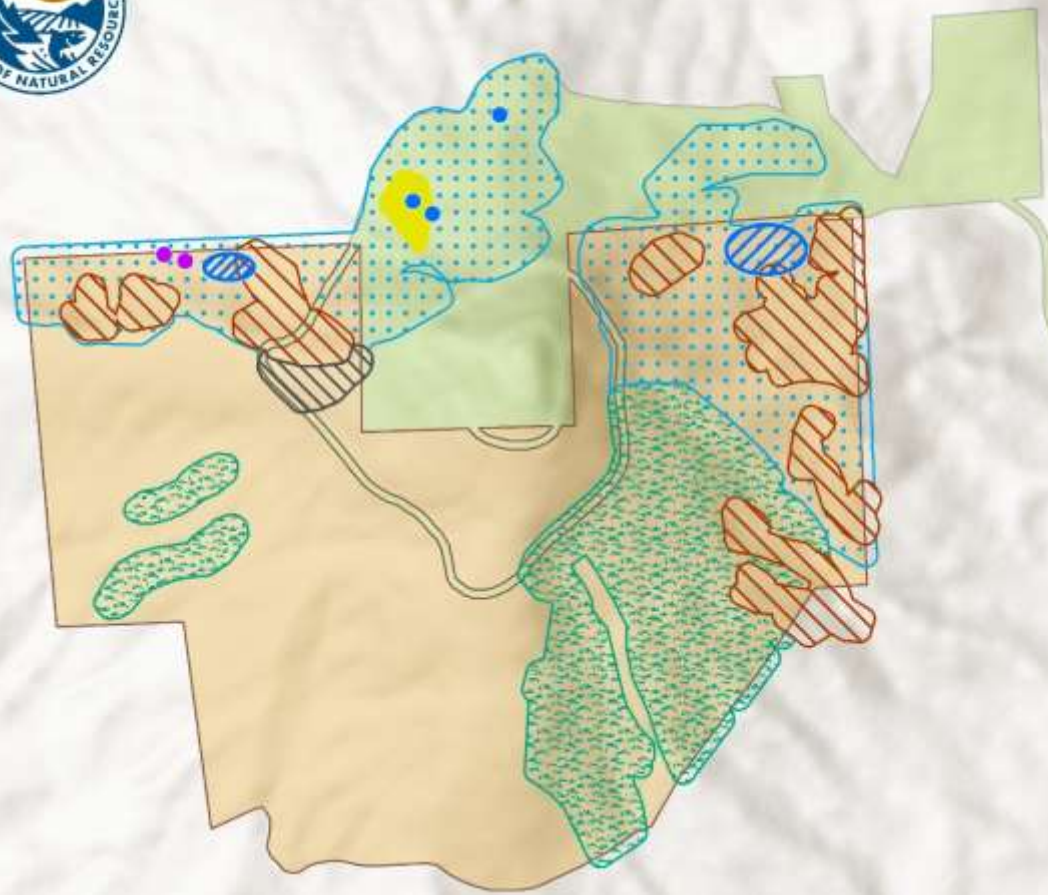
GNR/S2

Only native earthworm of the Palouse region



Graphic by Agony Illustrations (Portland, OR) – <https://www.facebook.com/agony.illustrations>

Graphic produced for Giant Palouse Earthworm (Moscow, ID music promoter) – <https://www.facebook.com/GiantPalouseEarthworm>



Steptoe Butte Proposed Natural Area

- | | | | |
|---|--|---|--|
|  | (<i>Populus tremuloides</i>) / <i>Crataegus douglasii</i> / <i>Heracleum maximum</i> Wet Shrubland |  | <i>Calochortus nitidus</i> |
|  | <i>Festuca idahoensis</i> - <i>Symphoricarpos albus</i> Herbaceous Vegetation and <i>Festuca campestris</i> - <i>Festuca idahoensis</i> - <i>Geranium viscosissimum</i> Grassland matrix |  | <i>Pyrrcoma liatriformis</i> |
|  | <i>Festuca idahoensis</i> - <i>Symphoricarpos albus</i> Grassland |  | <i>Silene spaldingii</i> |
|  | <i>Pseudoroegneria spicata</i> - <i>Festuca idahoensis</i> Palouse Grassland |  | <i>Silene spaldingii</i> outplantings |
| | |  | Steptoe Butte Prairie Reserve |
| | |  | WA State Parks and Recreation Commission |

Thank You



Photo by Joe Rocchio



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