Erigeron davisii Inventory Baker Resource Area, Vale District BLM

Roger Ferriel, botanist

December 2012

Introduction

Erigeron davisii (Cronquist) G. L. Nesom is a diminutive perennial tap rooted composite with white ray flowers that is endemic to the canyon grasslands of the lower Snake River and its tributaries (Nesom 2004 and 2006). It occurs on rocky ridges and slopes, basalt outcrops, and sparsely vegetated woodland openings or edges in eastern Oregon and western Idaho (Nesom 2004). *E. davisii* was first described as a variety of *Erigeron engelmannii* by Cronquist (1947) from a collection made by Ray J. Davis in 1941 on White Bird Summit in Idaho County, Idaho. Nesom (2004 and 2006) found that the differences between *E. engelmannii* and *E. engelmannii* var. *davisii* were great enough to warrant recognition at the species rank for *E. engelmannii* var. *davisii*. The geographic range of *E. davisii* is also distinct from the range of *E. engelmannii.* Their two ranges do not overlap. *Erigeron davisii* is still referred to as *E. engelmannii* var. *davisii* in GeoBOB which follows the outdated taxonomy found in the USDA PLANTS database.

The published distribution for *Erigeron davisii* was Idaho, Nez Perce, and Lewis Counties in Idaho and Wallowa County in Oregon (Nesom 2004). In 2003 Curtis Björk collected a specimen of *E. davisii* in Asotin County WA on or in close proximity to Mount Wilson. Curtis made a herbarium voucher collection of *E. davisii* which was never deposited in a herbarium (Björk pers. com.). Björk completed a siting report and submitted it with a mapped polygon of *E. davisii* at Mount Wilson (Figure 1) to the WA Natural Heritage Program. Although Björk's collection was potentially a WA state record for *E. davisii*, this was a very small range extension for *E. davisii*. The mapped polygon for *E. davisii* submitted by Björk is located 0.1 air miles north of the Oregon state line and 4.85 air miles north of the nearest recently documented location of *E. davisii* in Wallowa County (Oregon Element Occurrence # 18). The purpose of this project was to determine if *E. davisii* occurs on BLM managed lands in WA and if it did, to collect a herbarium voucher to document its occurrence in WA.

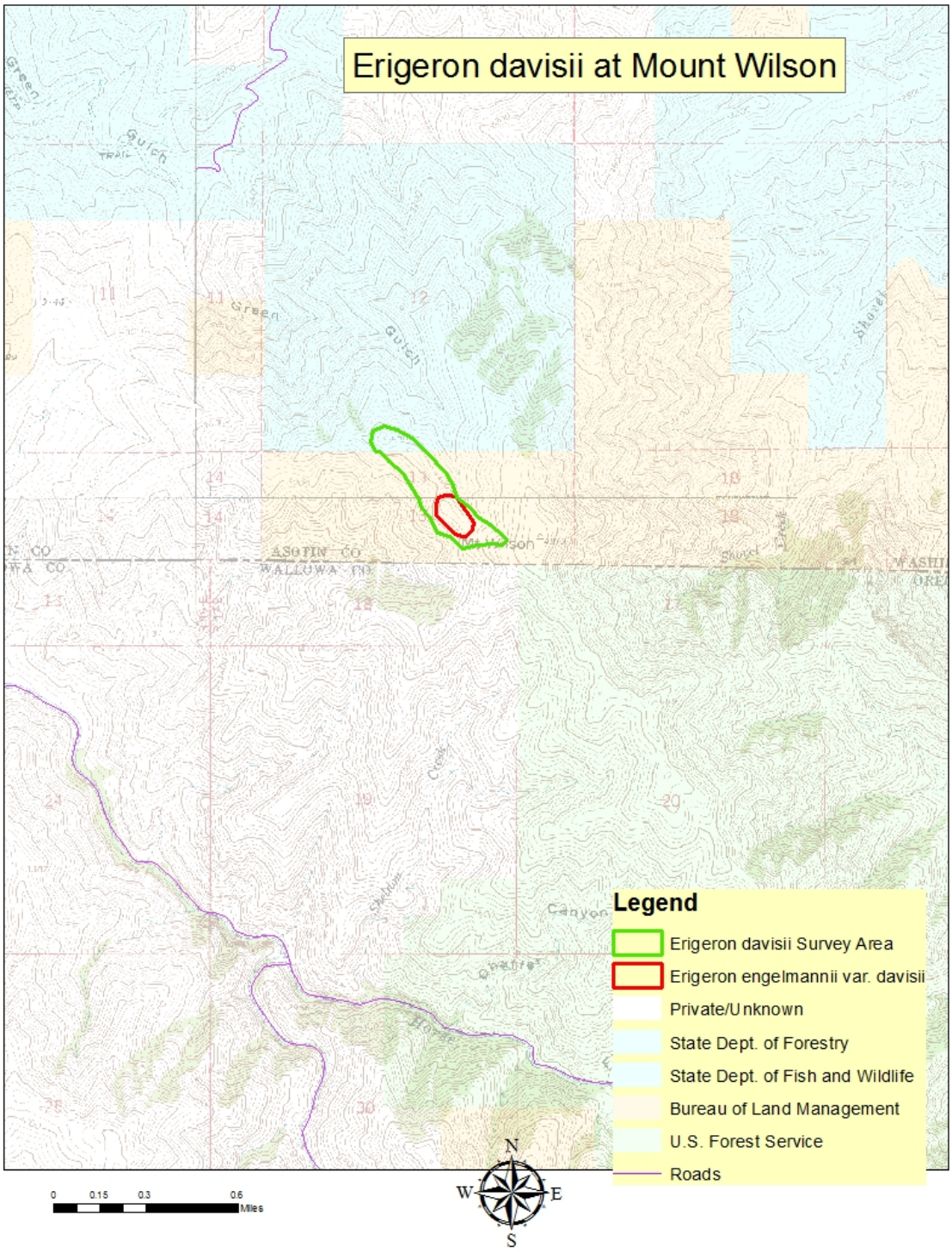
Study Area

The study area is BLM lands in southern Asotin County located on lower Joseph Creek and the Grande Ronde River. Surveys were focused on rocky ridge areas that are the preferred habitat for *Erigeron davisii*. The road access is very limited in this area. The few open roads that are present are located in the valley bottoms, making for long hikes to ridges where *E. davisii* habitat occurs.

Methods

Jenifer Ferriel graciously volunteered to help out with these surveys. We used the focused (intuitive controlled) survey method (USDAFS 2005), focused on rocky ridges. Other Sensitive plant species that were surveyed for include: *Silene spauldingii*, *Pyrrocoma scaberula*, *Calochortus macrocarpus* var. *maculosa*, *Mimulus patulus*, *Oenothera caespitosa* var. *marginata* and *Astragalus arthuri.*

Figure 1 ***Erigeron davisii*** **on Mount Wilson.**



Results

Mount Wilson

On June 16 we revisited the purported *Erigeron davisii* location on Mount Wilson found by Curtis Björk in 2003. We hiked up the old private ATV trail that comes up from the south from Horse Creek and goes to Mount Wilson, which is a climb of 2,300 vertical feet. We surveyed the area of BLM land where the *E. davisii* occurrence is mapped (Figure 1). We did not find any *E. davisii* in our search of the mapped polygon on Mt. Wilson. The only *Erigeron* that we did observe was *E. corymbosus* which has purple ray flowers. No Special Status plants were observed in our survey of the Mount Wilson area.

The BLM lands on Mount Wilson are very good condition canyon grasslands with little sign of livestock grazing and the dominant plant community is *Pseudoroegneria spicata*/*Festuca idahoensis* (Figure 2). There were few weeds observed on the BLM parcel except in close proximity to the road (ATV trail). The area is heavily used by a herd of elk and the Douglas fir stand that is in the north facing draw has an understory of mostly bare ground from the elk use. The good condition BLM lands contrast with the lower elevation private lands where nonnative weedy plants including diffuse knapweed, yellow star thistle, jointed goatgrass, cheatgrass, Ventanata, rat tail fescue, sulphur cinquefoil, prickly lettuce, rye brome, hound's tongue and Scotch thistle are all common. Horse Creek and Mount Wilson were burned in late August 2012 in the Cache Creek fire. The fire's effects on the area are unknown.

Time did not allow us to explore this good condition canyon grassland area further. There are many little ridges in this area and it is possible that Björk's *Erigeron davisii* site was incorrectly mapped and it occurs on a different ridge in the vicinity. I emailed Björk a copy of the mapped polygon and asked him if he was certain that this was the location where he had found *E. davisii*. Curtis replied on 6/20/2012: "*Looks like the right ridge is marked with the polygon; it's the ridge next over to the west from the one that approaches Mt. Wilson from the north. Maybe it was further out on the ridge in a northwesterly direction? It grows on sparsely vegetated gravel flats.*

I found the Erigeron during a pleasure hike, so I wasn't so careful about marking exactly where on the ridge it occurred. Sorry not to have got exact coordinates. One of these years I'll get back there and reattempt to relocate it. Last two times I tried, I had to turn back early to get out of the way of approaching thunderstorms."

Joseph Creek

On June 17 we attempted to reach the BLM parcel that is located on the ridge between the lower Grande Ronde River and Joseph Creek. The BLM parcel is located 1,900 vertical feet above the road located along Joseph Creek (Figure 3). A cold front passed through the area that day with wind gusts of 30 to 40 mph. It was not safe to be on the open narrow exposed ridge with these winds gusts. Thus, we were unable to reach the BLM managed parcel.

We did survey approximately 30 acres of WA State Wildlife lands (Figure 3), where we

did find one new location each for *Calochortus macrocarpus* var. *maculosa* (Figure 4), *Mimulus patulus*, and *Oenothera caespitosa* var. *marginata* (Figure 3). The *C. macrocarpus* var. *maculosa* was widely scattered over the survey area. The entire extent of its population was not determined. *Mimulus patulus* was associated with a small seepy cliff area. *Oenothera caespitosa* var. *marginata* occurred on sandy soils that were very sparsely vegetated. The condition of this survey area was fair to good. Livestock usage appeared to be minimal due to the steep terrain and limited access to water. Still, even though this area appeared to lack any recent disturbance, there was an abundance of cheatgrass in the interspaces between the bunchgrasses (Figure 5). Yellow star thistle was also present as scattered individuals in areas that also did not appear to have been previously disturbed.

All Special Status plant locations and surveys were entered into GeoBOB.

Figure 2 Looking south from Mount Wilson into Horse Creek.

Figure 3 Erigeron davisii Inventory area Joseph Creek, June 17, 2012.

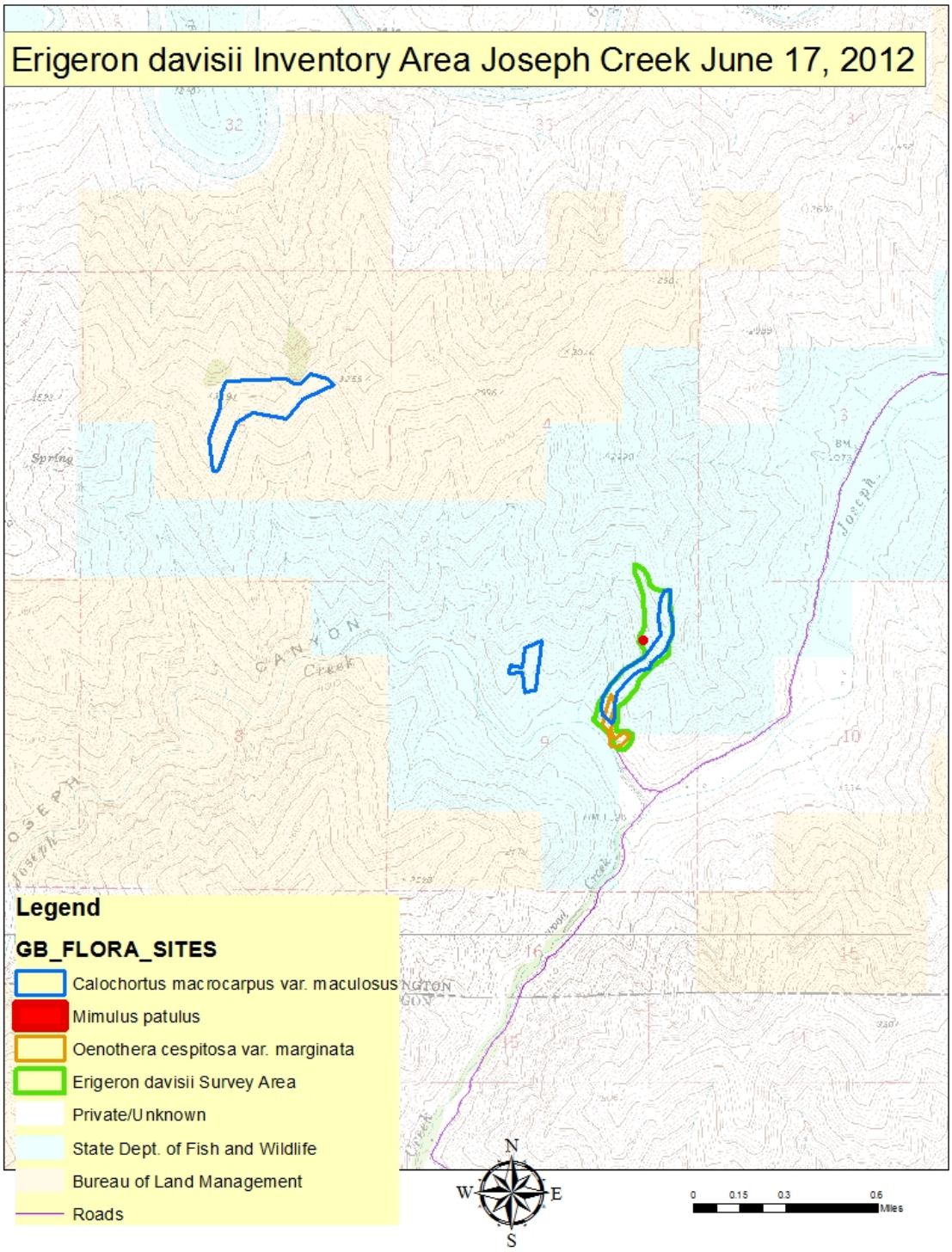


Figure 4 Calochortus macrocarpus var. maculosa Joseph Creek. June 17, 2012.

Figure 5 *Calochortus macrocarpus* var. *maculosa* site, Joseph Creek, June 17, 2012. Note abundance of cheatgrass in perennial grass interspaces.

Lessons Learned

The long hiking distances to the BLM managed parcels did not allow adequate time to complete this project. Access to these areas requires climbing approximately 2,000 vertical feet through steep rough terrain to get to the BLM managed parcels. Additional areas were planned to be surveyed as part of this project, but due to time constrains were not completed. Access to these upper ridges would be most effectively accomplished using a helicopter. Another option that I did explore was using a UTV to ferry us up the Green Gulch Road system. This would allow access to the Mount Wilson area and the ridges to the north of it. I could not schedule the UTV trip with Baker's Recreation staff, before fire danger had become extreme in this area which precluded us working further in this area.

Erigeron davisii does not appear to occur in the mapped polygon that Björk submitted for the Mount Wilson site. It appears that this site is incorrectly mapped. Björk's *E. davisii* collection from Mount Wilson is also not a state record for WA. A search for *Erigeron davisii* on the Consortium of Pacific Northwest Herbaria shows two previous collections of *E. davisii* from Asotin County, WA. One collection by E. W. Tisdale (Accession # 160138) from 1978 is from on Rattlesnake Grade of State Highway 129. The second collection is by Larry Hufford (Accession # 360033) from 1998 and is from near the Montgomery Ridge Road. Both of these records for *E. davisii* in WA are on private lands. It is still unknown if *E. davisii* occurs on BLM lands in WA.

Literature Cited

Cronquist, A. 1947. A revision of the North American species of *Erigeron*, north of Mexico. Brittonia 6:121–302.

Nesom, Guy L. 2004. Taxonomic Reevaluations in North American *Erigeron* (Asteraceae: Astereae). Sida 21(1) pages 19 - 39.

Nesom, Guy L. 2006. Erigeron. In Flora of North America Editorial Committee [eds.], Flora of North America, Vol. 20, pages 256–348. Oxford University Press, New York, New York, USA.

USDA Forest Service. 2005. Threatened, Endangered and Sensitive Plants Survey Field Guide. Washington DC. Rangelands Staff.