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A Preliminary Checklist of Lichens from Kamiak Butte County Park, Washington State

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A Preliminary Checklist of Lichens from Kamiak Butte County Park, Washington State, USA

Amanda Chandler, Emma Sell, and Jessica L. Allen



135 species of lichens documented from Kamiak Butte County Park, Palouse ecoregion, eastern Washington State

Introduction

- The Palouse ecoregion is among the most critically endangered ecosystems in the USA, with <1% of land remaining in a natural state (Noss et al. 1995)
- Ill-suited for agriculture, Kamiak Butte County Park (298 acres) is one of few protected areas within the Palouse ecoregion
- The lichen biodiversity in this region is currently poorly understood

Methods

- We reviewed the available data on historical collections from the park to compare current and past lichen diversity
- Lichens were collected in the Fall of 2018 and Winter 2019 from a representative sampling of habitats and substrates throughout the park
- Specimens were identified and recorded following standard methods (Brodo et al. 2001)

Results

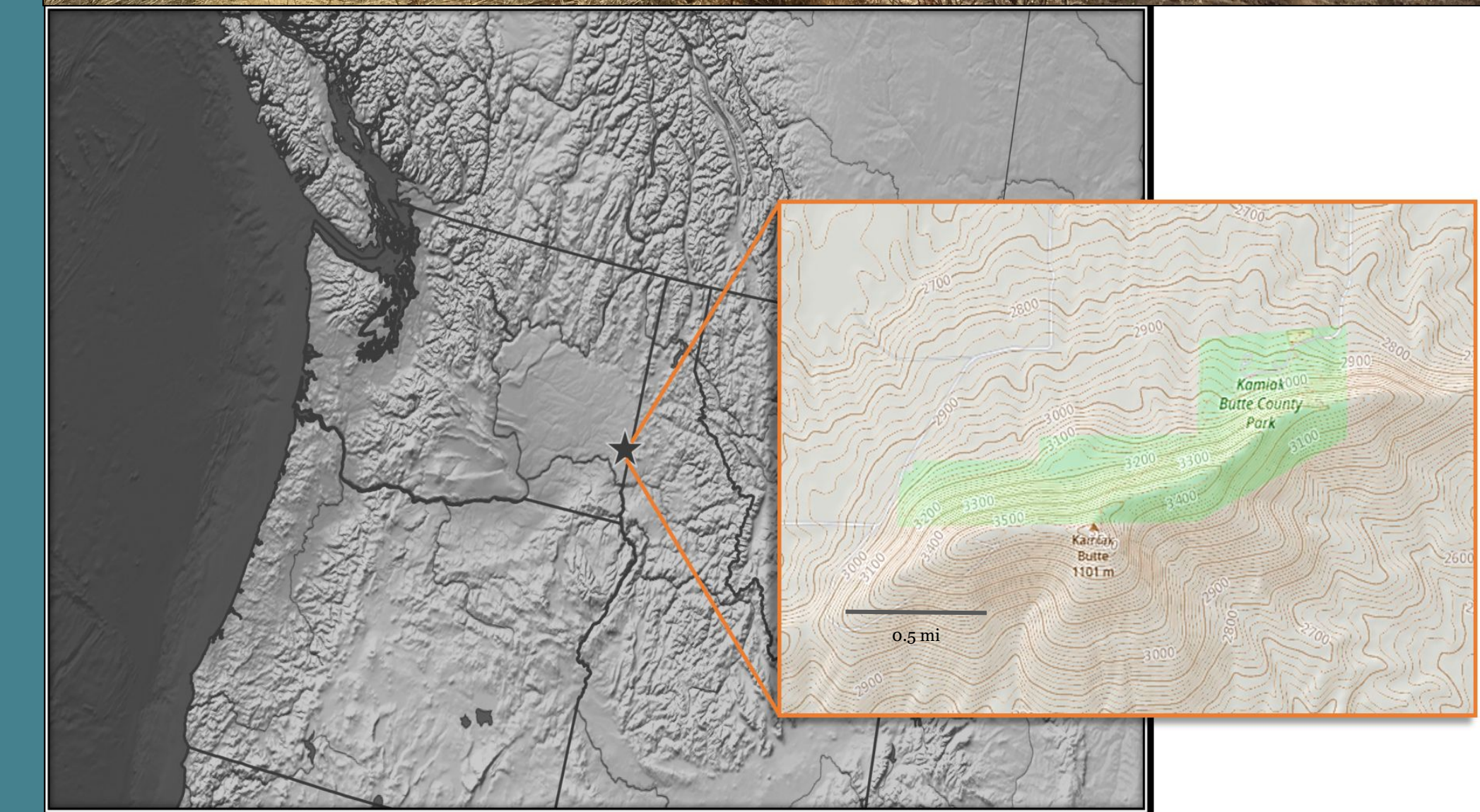
- A total of 225 new voucher specimens were collected for this study
- A rare species, *Rhizocarpon cookeanum*, was discovered in the park (currently ranked as S1, R1)
- 36 historically collected species were rediscovered
- The most frequently collected species were *Evernia prunastri*, *Hypogymnia imshaugii*, *H. tubulosa*, and *Letharia vulpina*
- The most diverse genera in the park are *Cladonia*, *Lecanora*, *Peltigera*, *Rhizocarpon*, and *Usnea*

Discussion

- Among the species that were not rediscovered during our field work were three sensitive cyanolichens (*Nephroma parile*, *Pseudocyphellaria anomala* and *P. anthraspis*). The loss of these species may be due to environmental change
- Species diversity was surprisingly high given the small size of the park, especially when compared to the nearby Turnbull National Wildlife Refuge (TNWR; 20,640 acre) where 288 species were reported (Noell et al. in prep). Diversity at TNWR is comparable to large protected areas in the region (McCune and Rosentreter 1998, Link et al. 2000, Smith and Rausch 2007)
- Additional surveys required to confirm absence of historical records
- Re-examination of historical herbarium specimens pending

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Literature Cited: Brodo et al. 2011 Yale University Press. Link et al. 2000 Washington State University. McCune and Rosentreter 1998 Evansia. Noss et al. 1995 US Department of the Interior. Smith and Rausch 2007 Evansia.



61 species newly reported 40 historically collected species not rediscovered during modern surveys



DOCUMENTED SPECIES BY GROWTH FORM

