

FIRST DOCUMENTED OCCURRENCE OF *KELLOGGIA GALIOIDES* (RUBIACEAE) IN COLORADO, A RANGE EXTENSION

ROSS A. MCCAULEY

Department of Biology
Fort Lewis College
Durango, Colorado 81301
mccauley_r@fortlewis.edu

ABSTRACT

A recent collection of *Kelloggia galioides* Torr. from southwestern Colorado is documented. This collection represents the first known occurrence of the genus in Colorado and a range extension east and northeast from localities in Utah and Arizona/New Mexico.

Kelloggia galioides Torr. is a delicate perennial herb native to western North America. It is one of two species of *Kelloggia*, the other being *K. chinensis* Franch. from the Hengduan Mountains of southwestern China (Nie et al. 2005). *Kelloggia galioides* was first described from along the Walla Walla River in Washington (Torrey 1874) and is most abundant across the Sierra Nevada of California, where it is an understory component of coniferous forests (Hickman 1993). It extends eastward across the Great Basin to scattered localities in northwestern Wyoming, central and eastern Utah, northern Arizona, and northwestern New Mexico (CCH2 Portal 2021; SEINet 2021).

In the Four Corners Region, *Kelloggia galioides* is known from small populations in the Abajo Mountains (Utah) and Lukachukai and Chuska Mountains (Arizona/New Mexico), where it occurs in piñon-juniper, sagebrush, Douglas-fir, and ponderosa pine forests (Heil et al. 2013). The plants reported here from Colorado occur in a similar habitat in the San Juan Mountains and represent a range extension for the species 153 km east from the nearest locality in the Abajo Mountains (*Clifford 95-735*, ASC, NY, UNM) and 165 km northeast from the nearest locality in the Chuska Mountains (*Clifford 00-560*, SJNM).

Voucher specimen. Colorado. La Plata Co.: San Juan National Forest, S of Haviland Lake, ca. 1 km NE (straight line distance) from Chris Park Campground, along Miners Trace Trail, ca. 1.8 km (along trail) from trailhead at E side of Haviland Lake Campground, E of Elbert Creek. 13N 0252936E 4156522N, ±15m (WGS84), 2404 meters elev., 24 Jun 2020, *McCauley 1152* (FLD, KHD). Figures 1-2.

The *Kelloggia* locality is in an open forest of *Pinus ponderosa* with occasional *Pseudotsuga menziesii* and an understory dominated by shrubs of *Quercus gambelii*. Plants occur densely in a relatively small area of approximately 200 m², less densely and patchy outside of that. They were flowering and fruiting in both 2020 and 2021. Further exploration of the adjacent forest is needed to determine the full areal extent of the species.

The Miners Trace Trail is part of the USFS Chris Park/Haviland Lake Trail System used for hiking and horseback riding, thus these *Kelloggia* plants may represent a recent introduction. The population, however, appears to be well established, and the valley of Elbert Creek also supports other regionally uncommon taxa including *Aralia racemosa* subsp. *bicrenata*, *Cypripedium parviflorum* var. *pubescens*, *Lilium philadelphicum* var. *andinum*, and *Sanicula marilandica*.

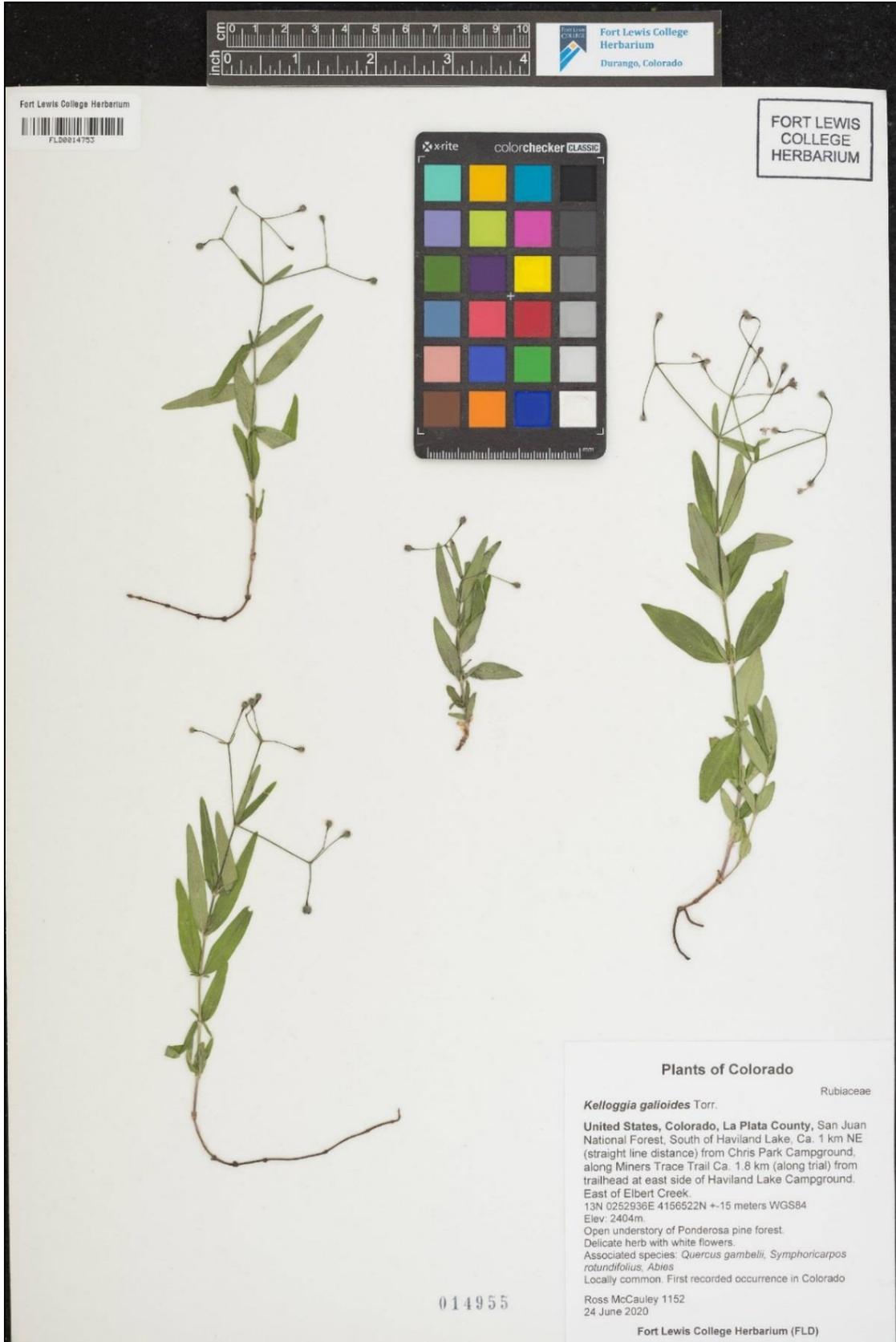


Figure 1. Voucher specimen of *Kelloggia galioides*, McCauley 1152 (FLD).



Figure 2. *Kelloggia galioides*, south of Haviland Lake, La Plata Co., Colorado, 24 June 2020.

LITERATURE CITED

- CCH2 Portal. 2021. Consortium of California Herbaria Data Portal. <<http://cch2.org/portal/index.php>>. Accessed 2 October 2021.
- Heil, K., S. O’Kane Jr, L.M. Reeves, and A. Clifford (eds.). 2013. *Flora of the Four Corners Region: Vascular Plants of the San Juan River Drainage—Arizona, Colorado, New Mexico, Utah*. Missouri Botanical Garden Press, St Louis.
- Hickman, J.C. (ed.). 1993. *The Jepson Manual: Higher Plants of California*. Univ. of California Press, Berkeley.
- Nie Z.-L., J. Wen, H. Sun, and B. Bartholomew. 2005. Monophyly of *Kelloggia* Torrey ex. Benth. (Rubiaceae) and evolution of its intercontinental disjunction between western North America and eastern Asia. *Amer. J. Bot.* 92: 642–652.
- SEINet. 2021. Southwest Environmental Information Network. <<http://swbiodiversity.org/seinet/index.ph>>. Accessed 2 October 2021.
- Torrey, J. 1874. *Kelloggia*. P. 332, in A. Gray (ed.). *United States Exploring Expedition, during the years 1838, 1839, 1840, 1841, 1842, under the command of Charles Wilkes, U.S.N., Vol. 17*. Sherman, Philadelphia.