

**POTENTILLA INDICA (ROSACEAE) NEW TO UTAH,
WITH DISCUSSION OF DISPERSAL BY THE AMERICAN ROBIN**

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ABSTRACT

Potentilla indica, previously treated under the name *Duchesnea indica*, is first reported here as new to the naturalized flora of Utah (vouchered from urban and suburban habitats in South Ogden, Weber County). The American Robin is discussed as a possible vector of dispersal.

Duchesnea indica (Andrews) Teschem. (Indian strawberry, mock strawberry; Rosaceae) was realigned into *Potentilla* by Eriksson et al. (1998), where its correct name is *Potentilla indica* (Andrews) T. Wolf. *Duchesnea* as a genus is phylogenetically nested within the larger and more widespread genus *Potentilla*. This placement of *Duchesnea* has been supported by further molecular phylogenetic research (Potter et al. 2007 and others). Ertter & Reveal (2014) preferred to retain *Duchesnea* as distinct because of its condensed shoot structure at stolon nodes, enlarged 3-lobed epicalyx bractlets, and accessory fruit structure, but others (e.g., Weakley 2015; Kartez 2018) have accepted its position within *Potentilla*.

Potentilla indica was reportedly introduced to the USA as a medical and ornamental plant (Ertter & Reveal 2014). The species is an herbaceous perennial that has spread over most of eastern continental USA to central Texas, eastern Oklahoma, Kansas, Nebraska, and Wisconsin. It is absent from the New England states except for Connecticut, and the western Great Plains and mountain states of the west, but it is recorded in California, Oregon, and Washington (Hitchcock et al. 1969; Ertter & Reveal 2014). The species has also become naturalized in Africa, Australia, Europe, and South America (Ertter & Reveal 2014). As a weed, *P. indica* does not appear to have noxious possibilities in terms of ecological stability in North American plant communities.

Based upon the following specimen, we report *Potentilla indica* as new to the naturalized flora of Utah.

Utah. Weber Co.: South Ogden, scattered in lawns and edges of shaded woodlands, 0.2 mi E of jct of Hwy 98 and E5425 S Street and in lawns and shaded woodland edges of cul-de-sac on E 5375 S Street, 26 Jul 2017, *J.R. Singhurst 21,184* with Liz, Ava, and Ruby Singhurst (BAYLU). Figures 1 and 2.

Multiple populations of *Potentilla indica* were growing in the South Ogden area in shaded lawns and shaded edges of mountain oak woodlands under an overstory of *Acer grandidentatum*,

Amelanchier alnifolia, *Berberis repens*, *Cercocarpus montanus*, *Prunus virginiana*, *Quercus gambelii*, *Rosa* sp., and *Symphoricarpos oreophilus*. Herbaceous flora associated in close proximity included *Cirsium arvense*, *Epilobium ciliatum*, *Glechoma hederacea*, *Poa annua*, *P. pratensis*, *Plantago lanceolatum*, *Taraxacum officinale*, and *Tragopogon dubius*. Although distinguishing individual plants was difficult (the plants spread vegetatively by stolons), the number of plants in flower and fruit at the voucher site was estimated as 35 to 50 (Figs. 1 and 2).

Discussion

Anthropogenic modifications of the Great Plains have promoted plant distributions expanding from the eastern USA (Mink et al. 2010). The fruit is not sweet, which may affect dispersal by mammals and birds. Box turtles (*Terrapene carolina*) are known consumers and dispersers of *Potentilla* fruit and seed in localized habitats (Braun & Brooks 1987). Native migratory passerines as vectors of distributional expansion has been described (Mink et al 2015).

A widely distributed passerine that migrates both latitudinally and altitudinally throughout the USA distribution of *Potentilla indica* (Alderfer et al. 2014) is the American Robin (*Turdus migratorius*). This species has significantly expanded its range in the last 50 years (Eiserer 1976; Ehrlich et al. 1988; Alderfer et al. 2014), especially in areas where trees are planted, structures erected, and water distributed, thus creating suitable habitats and nesting sites. The American Robin is one of the most abundant birds in the Utah, from the lowlands into mountains of the Uintah and Wasatch ranges and Uintah Basin (Behle 1981). Population increases in a post-DDT era also have led to its range expansion (Knapp et al.; Ehrlich et al. 1988). This North American passerine is a known frugivore which readily feeds from the ground (Paszkowski 1987; Wheelwright 1986) and prefers to forage in irrigated landscapes.



Figure 2. *Potentilla indica* in Weber Co., Utah, 26 July 2017. Photograph by J.R. Singhurst.



Figure 2. *Potentilla indica* in Weber Co., Utah, 26 July 2017. Photograph by J.R. Singhurst.

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