

Bur Buttercup, *Ranunculus testiculatus*, New to Eastern Canada

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Bur Buttercup (*Ranunculus testiculatus*) is newly reported for eastern Canada based on two collections from campgrounds in southern Ontario. This vernal, annual, Eurasian weed is widespread in western North America and is expanding its range in the east; it should be expected elsewhere in eastern Canada. Bur Buttercup is known to be toxic to livestock.

Key Words: Bur Buttercup, *Ranunculus testiculatus*, Ranunculaceae, first records, weed, range expansion, campground, Ontario, eastern Canada.

On 17 April 2004, Blaney found an unusual buttercup growing on a campsite in Long Point Provincial Park, on the north shore of Lake Erie, Norfolk County, Ontario (42.58°North, 80.41°West). A few days later on 22 April 2004, Goodwin found the same species growing in a municipal campground in Cobourg, on the north shore of Lake Ontario, Northumberland County, Ontario (43.96°North, 78.16°West). This distinctive plant, called Bur Buttercup (*Ranunculus testiculatus* Crantz), has not previously been reported from Ontario (Morton and Venn 1990; Newmaster et al. 1998) or eastern Canada (Scoggan 1978; Gleason and Cronquist 1991; Whittemore 1997; Kartesz 1999).

Ranunculus testiculatus is a small scapose, somewhat tomentose, annual in the buttercup family (Ranunculaceae) which flowers early in the season. The leaves are entirely basal and are 1.5 to 4 cm long, ternate to biternate, with narrow linear divisions. The several leafless peduncles are 2 to 8 cm tall, and each bears a single, inconspicuous pale yellow flower (Figure 1). The fruiting heads are bur-like when dry and mature, giving the plant its common name, Bur Buttercup. Superficially the plant is very different in appearance from other buttercups and is often placed in a separate genus as *Ceratocephalus testiculatus* (Crantz) Roth by some authors (e.g., Cody 1988; Cusick 1989) or *Ceratocephala testiculata* (e.g., Tutin et al. 1993; Mitchell and Tucker 1997; Kartesz 1999). However, most recent North American floras now include it within *Ranunculus* (e.g., Gleason and Cronquist 1991; Whittemore 1997). A related species, *R. falcatus* L., has been reported from North America, but all reports are apparently based on misidentified material of *R. testiculatus* (Whittemore 1997). Common names used for *R. testiculatus* in North America include Bur Buttercup or Bur-buttercup (e.g., Barkworth 1982; Pohl 1984; Cusick 1989; Gleason and Cronquist 1991; Swink and Wilhelm 1994), Hornseed Buttercup (e.g., Cody 1988; Douglas

et al. 1999), Sage Buttercup (e.g., Mitchell and Tucker 1997), and Curve-seed-butterwort (e.g., Kartesz 1999).

The first North American report of *Ranunculus testiculatus* was from Utah in 1932, followed by discoveries in other western states soon after: Oregon in 1938, Washington in 1940, and Colorado in 1948 (Barkworth 1982). It continues to spread in western North America (Hitchcock and Cronquist 1973; Taylor 1983; Weber 1990; Whittemore 1997). In Canada, Bur Buttercup has been known from southern British Columbia for some time (Boivin 1966; Scoggan 1978), where it is infrequent in south-central and south-eastern parts of the province in dry disturbed clearings and sagebrush slopes in the steppe zone (Douglas et al. 1999). Cody (1988) reported the species new to Saskatchewan based on a collection from Assiniboia in 1987. Cody (1988) also mapped the Canadian distribution of *R. testiculatus*.

Cusick (1989) was the first to report Bur Buttercup in eastern North America, based on a 1977 collection from South Bass Island in western Lake Erie, and predicted it would be found elsewhere in the Great Lakes region. In New York State it was first collected in 1990 from the parking lot of a campground near Harriman in Orange County by D. J. DeLaubenfels (specimen in the New York State Museum, NYS A18183, personal communication C. Sheviak and T. Weldy). The first Chicago area collection was made in 1991 and with concerted searching it was found in 12 additional Chicago region counties in 1992 and 1993 (Swink and Wilhelm 1994). Other recent new state records are from Nebraska in 1970 (Macgrath and Weedon 1974), Iowa in 1984 (Pohl 1984), and Missouri in 1987 (Ladd and Schuette 1990). Bur Buttercup is considered a significant toxic weed of grazing lands in the western United States and has been responsible for the death of sheep (Olsen et al. 1982, 1983).

Several authors have noted the affinity of this species for campgrounds, particularly in eastern North Amer-



FIGURE 1. Bur Buttercup (*Ranunculus testiculatus*) plants. Long Point Provincial Park, Ontario, 6 May 2004. Photograph by Michael Oldham.

ica, for example the first reports from Iowa, Missouri, New York, Ohio, and the Chicago Region are all from campgrounds (Pohl 1984; Cusick 1989; Ladd and Schuette 1990; Swink and Wilhelm 1994; C. Sheviak personal communication). It seems likely that this species is dispersed by camping vehicles and associated equipment. The bur-like fruiting heads of the buttercup may readily attach to blankets and tents, and are thus carried to campsites that appear to provide ideal disturbed conditions. Other vernal, ephemeral Eurasian weedy species have found a niche in campgrounds and are presumed to have a similar dispersal mechanism, such as *Aira caryophyllea* (Silvery Hairgrass), *Aira praecox* (Early Hairgrass), *Apera interrupta* (Interrupted Windgrass), *Cerastium pumilum* (Curtis' Mouse-ear Chickweed), *Cerastium semidecandrum* (Small Mouse-ear Chickweed), *Erophila verna* (Spring Whitlow-grass), *Myosotis stricta* (Blue Scorpion-grass), *Poa bulbosa* (Bulbous Bluegrass), and *Veronica verna* (Spring Speedwell) (Crins et al. 1987; Oldham et al. 1995; Goltz 1996; Oldham and Zinck 1997). Both Ontario records are from campgrounds, a municipal campground in Cobourg, Northumberland County, and a provincial park campground at Long Point, Norfolk County. At both Ontario locations Bur Buttercup is well established but quite local. At Long Point Provin-

cial Park at least 500 plants occur, but they were found on only a single campsite, possibly suggesting a relatively recent introduction. In addition, the Long Point peninsula has been relatively well botanized in the past (Reznicek and Catling 1989). At Cobourg, Bur Buttercup grew in open, disturbed ground on at least four campsites with *Erophila verna* and *Taraxacum officinale* (Common Dandelion), while at Long Point it was found in sandy soil beneath planted Scots Pine (*Pinus sylvestris*) with *Cerastium semidecandrum*, *Stellaria pallida* (Lesser Chickweed), *Poa annua* (Annual Bluegrass), *Myosotis stricta*, and *Taraxacum officinale* (Figure 2).

Collection data for the Ontario records are as follows: ONTARIO, Norfolk County, Long Point Provincial Park, 42.58°North, 80.41°West, 6 May 2004, *M. J. Oldham* 29983 (DAO, MICH, NHIC, TRTE, UWO). Northumberland County, Cobourg Municipal Campground, 43.96°North, -78.16°West, 9 May 2004, *M. J. Oldham* 29996 (DAO, MICH, NHIC, TRTE).

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FIGURE 2. Bur Buttercup (*Ranunculus testiculatus*) habitat at Long Point Provincial Park, Ontario, on 6 May 2004. Bur Buttercup plants appear as a light coloured area in front of the closest Scots Pine tree in the foreground. Photograph by Michael Oldham.

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