

## Tall Buttercup (*Ranunculus acris*)

**Identification** Tall buttercup is a perennial forb that grows from a stout, abruptly ending root stock. It has glossy, bright yellow flowers on stems that can reach up to 3 feet tall. Tall buttercup stems are erect, hollow, and sometimes hairy. Stems branch on the upper part of the plant. Leaves are palmately divided, but the amount and depth of the leaf lobes is highly variable. Leaves on the lower stem have 3-5 deeply divided lobes, whereas the upper leaves are smaller with 3-4 narrow lobes. Basal leaves have 3 lobes and do not grow on stalks. Seeds are 2-2.5 mm long with a sharply pointed, curved beak about .6 mm long (see photo bottom right). Tall buttercup may be confused for the native sharpleaf buttercup (*Ranunculus acrifolius*). The two species can be distinguished by observing their leaves and seeds. Sharpleaf buttercup typically has leaves with 2-3 lobes, and the seed is larger (2.5-3.5 mm long with 1 mm beak).



**Impacts** Tall buttercup contains glycoside ranunculin, a chemical that is toxic to livestock, especially cattle. Tall buttercup is generally avoided due to its bitter flavor, however, if consumed it can cause blisters on the



lips and tongue, intestinal disorders, and respiratory failure. Because the plant is generally avoided, it typically persists and is believed to greatly reduce forage

production. Dense clones of tall buttercup may out-compete native and non-native plants, reducing plant diversity and forage production.



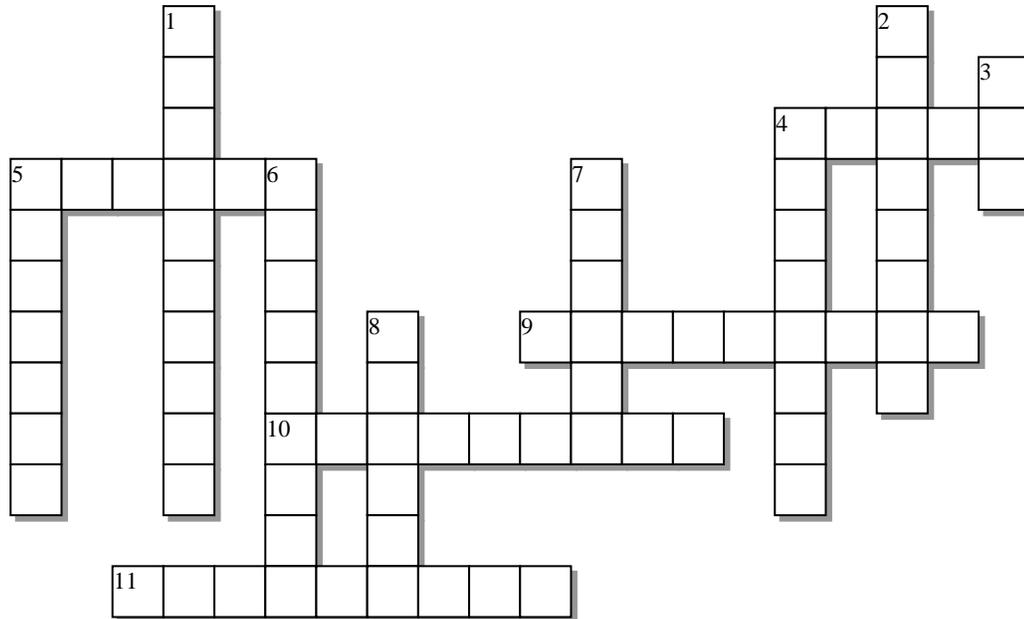
**Habitat** Tall buttercup occurs in moist fields, meadows, pastures, grasslands, and in irrigated and sub-irrigated

meadows. It has also been found along rivers, streams, lakes and roads. In Montana, tall buttercup infests about 20,500 acres in 13 different counties. It has been especially problematic in southwestern Montana.

**Spread** Tall buttercup spreads by rhizomes and seeds. Its short, thick rhizomes are capable of splitting 3-5 feet and forming daughter plants in clumps. The seeds are dispersed long distances by the short-hooked beak at the tip that can attach to the fur of animals.

**Current Research** Because there is very little existing data to inform land managers and producers about the ecological and economic impacts of tall buttercup, Montana State University, Madison County, Gallatin County, and local producers are working cooperatively on a research and education project to increase knowledge about its biology, ecology and integrated management. The cooperative project has three objectives: 1) Measure impacts of tall buttercup on plant diversity and forage production, 2) Test tall buttercup control strategies including herbicides, mowing, and fertilization alone and in combination with each other, and 3) Share results from these studies with land managers and producers across the state of Montana. Data will be collected summer 2012 and 2013. Extension and outreach events will occur over the next two years.

**Weed Post Puzzle: Test your knowledge of tall buttercup**



**Across:**

- 4 - Tall buttercup can grow up to \_\_\_\_ feet tall.
- 5 - The cooperative research and education project is testing control tools like herbicides, \_\_\_\_\_, and fertilization.
- 9 - Leaves of tall buttercup are \_\_\_\_\_ divided.
- 10 - This buttercup can be easily confused with tall buttercup.
- 11 - The first objective of the cooperative tall buttercup project is to measure impacts on \_\_\_\_.

**Down:**

- 1 - Ranunculus \_\_\_\_\_ is the scientific name of a native buttercup easily mistaken for tall buttercup.
- 2 - The leaves of tall buttercup can be highly \_\_\_\_\_.

**Down continued:**

- 3 - Tall buttercup tends to enjoy \_\_\_\_\_ habitats.
- 4 - Number of counties in Montana reporting tall buttercup.
- 5 - Study sites for the cooperative project are located in Gallatin and \_\_\_\_\_ counties.
- 6 - Not only is tall buttercup unpalatable to livestock, but it is also toxic due to \_\_\_\_\_ ranunculin.
- 7 - Because grazers don't like to eat tall buttercup, it is believed that the plant may reduce \_\_\_\_\_ production.
- 8 - You can tell apart tall buttercup and the native buttercup by observing their \_\_\_\_\_ and seeds.

Solutions are posted to the MSU Extension Invasive Rangeland Weed website:

<http://www.msuextension.org/invasiveplantsMangold/extensionsub.html>

