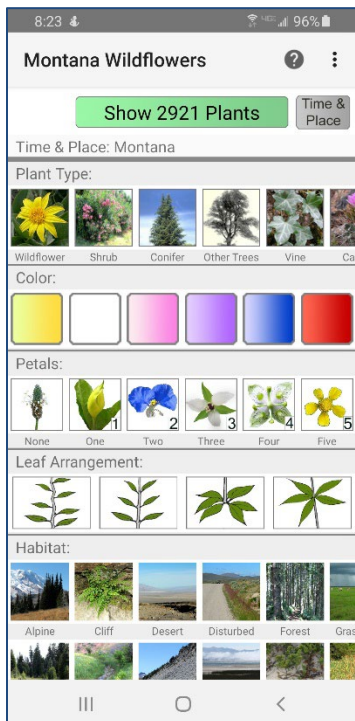


Plant Identification Apps for Your Smartphone

By Noelle Orloff, Extension Associate Specialist and Schutter Lab Diagnostician, noelleorloff@montana.edu



Introduction Smartphone apps are available for almost anything these days, including plant identification. Plant ID apps are a helpful tool to have in your botanical toolbox. There are two broad categories of these apps.

Some plant ID apps function somewhat like a traditional key in that they require the user to enter information about the plant in question (picture, left) and based on the information the app lists plants that fit the criteria. Two apps in this category that are especially useful in Montana include [Montana Grasses](#) and [Wildflowers of Montana/Montana Wildflowers](#). The identifications from these apps are only as accurate as the information entered; make sure to only choose a characteristic that fits your plant if you are certain you are correct.

Another group of plant ID apps uses artificial intelligence (AI) technology to identify plants based on photos a user takes with their phone (picture, bottom right). There are a number of these apps available.

Evaluating Plant ID Apps I am often asked which of the AI apps I recommend.

Thankfully, Dr. Erin Hill at Michigan State University has [evaluated these types of apps](#) for accuracy on a yearly basis, testing them against plants with a known identity in her neighborhood. In many cases apps correctly

identified the genus of an unknown plant, while misidentifying the species. This has been my experience with these apps as well; they often help me get “close” to a plant’s identity but require further work to get to the correct species. The study also found that apps are better at identifying mature plants compared to seedlings, and grasses may be more difficult for these apps to accurately identify compared with broadleaf plants. Based on Hill’s criteria, [PictureThis](#) was the most accurate app for the past three years, and [iNaturalist](#) and [PlantNet](#) also performed well. There are other helpful apps available (for example [Seek](#) was mentioned in an informal poll of Schutter Lab Facebook users); test different apps on known plants in your area and see which one works best for you.

Tips for Using Plant ID Apps Whichever app you choose; it is important to use some critical thinking. Double check your identification using a trusted resource. Find accurate photos of many naturally occurring plants online at the [Montana Field Guide](#). The Latin binomial name will be the most helpful search term. Also check the [USDA Plants Database](#) and the [Montana Field Guide](#) to see if your identified plant is known to occur in Montana or not. To check your plant’s identification with a real human, ask your local Extension office or your county weed district for assistance.

