

## Gentner's fritillary (*Fritillaria gentneri*)



### ENDANGERED



Flowers (left), habit (center), and habitat (right) of Gentner's fritillary. Photos by Melissa Carr (left and center), and Kelly Amsberry (right). If downloading images from this website, please credit the photographer.

### Family

Liliaceae

### Plant description

*Fritillaria gentneri* is a perennial herb arising from a fleshy bulb, with one to twelve deep red to maroon bell-shaped flowers produced on a single, erect, 40 to 70 centimeter tall flowering stalk. The leaves of reproductive plants occur in whorls along the stalk, while vegetative plants produce a single basal leaf varying in length from 0.5 to 29 centimeters. Most reproduction occurs through asexual production of small "rice grain" bulblets on the surface of mature bulbs – these detach from the mother bulb and develop into new individuals. In general, the majority of the plants in a population are vegetative (rather than flowering), with numerous basal leaves (each representing one individual bulblet) massed near each flowering stalk.

### Distinguishing characteristics

Individuals of this species can be distinguished from similar congeners by comparing the nectary gland length/tepal length ratio and the extent of style branching. The nectaries of *F. gentneri* generally extend 1/4 to 1/2 the length of the tepals, while those of *F. recurva* extend 1/4 or less, and the long glands of *F. affinis* extend 1/2 or more of the tepal length. The style of *F. affinis* is divided for 1/2 of its length or more, with widely spreading branches, while only the tip (1/4 or less) of *F. recurva*'s style is divided, with erect branches. The style of *F. gentneri* is intermediate between the two, with somewhat spreading branches extending slightly less than 1/2 the length of the style. These two characters, when evaluated in combination with flower color (scarlet in *F. recurva*, maroon in *F. gentneri*, and purplish-brown in *F. affinis*), adequately differentiate these three species.

### When to survey

Because vegetative plants of *Fritillaria gentneri*, *F. affinis*, and *F. recurva* are virtually indistinguishable, surveys for *F. gentneri* must be completed during the flowering season (late March to early April), and only the identity of reproductive individuals can

be accurately determined.

### **Habitat**

*Fritillaria gentneri* occurs in a surprising variety of habitats, from shaded riparian areas to open grasslands and chaparral, but generally prefers the ecotone between meadow and oak woodland. Populations inhabit sites from 306 to 1,544 meters in elevation, and occur on 25 different soil types. Plants appear to benefit from association with a wide variety of trees or shrubs, which may provide shade and protection from herbivory.

### **Range**

This species occurs from far northern California north to Josephine County, with the largest number of populations occurring near Jacksonville in Jackson County.

### **Oregon counties**

Jackson, Josephine

### **Federal status**

Endangered

### **Threats**

Habitat destruction due to development, competition from exotic weeds, and grazing

### **Conservation planning**

A U.S. Fish and Wildlife Service [Recovery Plan](#) (pdf document, 2.24 MB) was released for Gentner's fritillary in 2003.

### **Did you know?**

This unusual fritillary was first noticed in a flower arrangement by Jacksonville resident Katherine Gentner in the early 1940's. Katherine's father, an entomologist at the Southern Oregon Experiment Station, recognized the uniqueness of this beautiful wildflower, and sent a specimen to his friend and associate, Oregon State University botanist Helen Gilkey. Dr. Gilkey subsequently published the description of this new species in the scientific journal *Madroño*, naming the plant after the Gentner family. Jacksonville's continuing fondness for Gentner's fritillary is exemplified by the city's annual Fritillary Festival, held in late March and early April.

### **Current/Recent ODA projects**

Breeding system and hybridization in Gentner's fritillary  
Population variability of Gentner's fritillary

### **References**

Amsberry, K. and R.J. Meinke. 2002. Reproductive ecology of *Fritillaria gentneri*. Native Plant Conservation Program, Oregon Department of Agriculture, Salem, Oregon.

Amsberry, K., S. Meyers, and R.J. Meinke. 2006. Evaluation of inter-population variability for the state- and federally-listed species *Fritillaria gentneri*. Native Plant Conservation Program, Oregon Department of Agriculture, Salem, Oregon.

Brock, R. and R. Callagan. 2001. Site review of *Fritillaria gentneri* on BLM lands: 2001 report. Siskiyou Biosurvey, Ashland, Oregon.

Gilkey, H.M. 1951. A new fritillary from Oregon. *Madroño* 11:137-141.

U.S. Fish and Wildlife Service. 2003. Recovery plan for *Fritillaria gentneri* (Gentner's fritillary). U.S. Fish and Wildlife Service, Portland, Oregon. Available at [http://ecos.fws.gov/docs/recovery\\_plans/2003/030828.pdf](http://ecos.fws.gov/docs/recovery_plans/2003/030828.pdf) (pdf document, 2.24 MB).