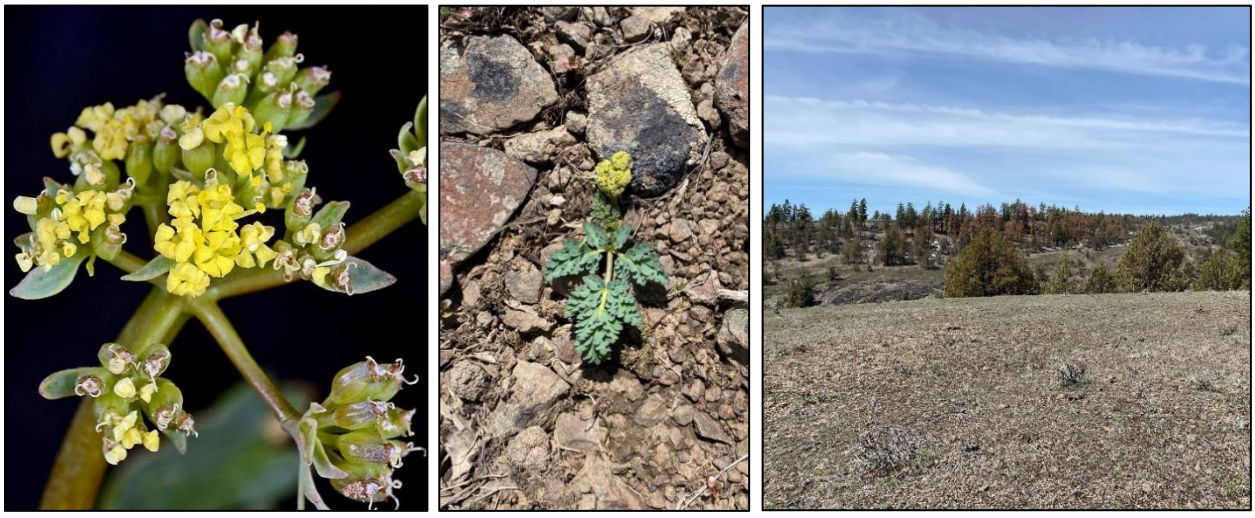
Ochoco lomatium
(*Lomatium ochocense*)

OREGON DEPARTMENT OF AGRICULTURE

ENDANGERED



Flower (left), habit (center), and habitat (right) of Ochoco lomatium. Photos by Gerald D. Carr (left; Courtesy of OregonFlora) and ODA staff (center and right). If downloading images from this website, please credit the photographer.

Family

Apiaceae

Plant description

Plants are acaulescent with globose tuberous roots with an irregularly thickened or elongated and slender upper 2-4 cm portion. Caudices are simple or 2-3 branched with basal leaf sheaths from previous years absent or weathering into a thatch of a few loose fibers or chartaceous scales at the base of the pseudoscape. The stems are absent with 2-4 cm pseudoscapes underground. The basal leaves of Ochoco lomatium are glabrous, glaucous, and thick or somewhat succulent. The primary leaflets are pinnate, with 1-3 secondary leaflet pairs along each rachis with laterals half the central primary in length. The secondary leaves are pinnatifid with 4-7 lobes. Tertiary leaves are absent and ultimate apical lobes obovate or oblong, 2-6 by 2-3.5 mm, with tips subacute, obtuse, or rounded. *Lomatium ochocense* has no cauline leaves. There are 1-2 inflorescence peduncles that are 4-6 cm and glabrous. No involucral bracts are present beneath the 2-6 rays that are 0.4-1 cm long and glabrous. *Lomatium ochocense* has 4-8 involucel bractlets that are elliptic or lanceolate, 2-4 by 0.4-1 mm with scarious margins. The umbellets are 10-15 flowered with pedicels 2-4 mm long. Flowers have yellow petals with yellow or yellowish-white anthers. Ochoco lomatium fruits are elliptic, 5-8 mm long, and glabrous with the body of the fruit 2-3.5 mm wide and thin wings 0.5-1 mm wide.

Distinguishing characteristics

Lomatium ochocense occurs in the same range of multiple lomatium species including *L. cous*, *L. hendersonii*, and *L. macrocarpum*. Ochoco lomatium can be distinguished from the other species by the thick, glaucous, glabrous leaves and the leaflets that are broadly overlapping and oval-ovate. The other species of lomatium that may co-occur often have glabrous leaves, but they are never thick and glaucous, and the leaflets are typically remote except sometimes distally. Additionally, *L. cous* has obovate to oblanceolate involucel bractlets that are 0.8 to 3.2 mm wide compared to *L. ochocense*'s shorter, elliptic or lanceolate involucel bractlets that are 0.4 to 1 mm long. *Lomatium hendersonii* has smaller fruit bodies that are 1-2 mm wide compared to 2-3.5 mm wide, and longer peduncles when in fruit that are 6-13 cm long compared to 4-6 cm long. *Lomatium macrocarpum* is caulescent, or subcaulescent, with 2-15 cm of its puberulent or villous stem above ground whereas *L. ochocense* has no aboveground stem.

When to survey

Survey should be conducted when the species is in flower, typically late April through early June.

Habitat

Lomatium ochocense is found in the scabland habitat of the Ochoco mountain region. The species occurs at elevations of 4,350 to 4,650 feet. It is found on open, sloped, and relatively barren scabland with the dominant plant species being *Artemesia rigada*, *Poa secunda*, *Allium macrum*, *Lewisia rediviva* and several other species of lomatium. The soils are loamy-skeletal with a hard and highly fractured basalt bedrock; soils are saturated by cold moist winters that dry quickly by late spring or early summer.

Range

Ochoco lomatium only occurs in Crook County on the south edge of the Ochoco National Forest and on the Bureau of Land Management's Prineville District.

Oregon counties

Crook

Federal status

No status

Threats

The most immediate threats to *Lomatium ochocense* are from grazing (wildlife and cattle) and from human impacts associated with recreational activities (e.g., access for camping, hunting, or fishing) which can cause habitat degradation and plant damage. Cattle grazing is permitted in two occurrences of *L. ochocense* during its flowering and fruiting period. Browsing and trampling by cattle has been observed and there is evidence of grazing from elk, deer, antelope, and pocket gophers. Invasive weeds—particularly medausahead (*Taeniatherum caput-medusae*) and cheatgrass (*Bromus tectorum*)—are spreading in the habitat and can eventually outcompete native forbs. *Ventenata dubia* is present in the region and is expected to become a major problem for native plant diversity in scabland habitat. The

nonnative grasses can increase the fire return interval and intensity in invaded areas, possibly destroying the soil seed bank and enabling the proliferation of weeds. Small population size is problematic for *Lomatium ochocense* because there are fewer redproductive individuals and decreased genetic diversity can increase inbreeding depression and reproductive problems.

References

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