Hypochaeris glabra L.; smooth catsear
Hypochaeris radicata L.; common catsear

Smooth and common catsear

Family: Asteraceae
Range: Smooth catsear is found throughout California, Oregon, and Washington, except for the deserts; also in many southern states and a few eastern states. Common catsear is found in most western states, except North and South Dakota, Wyoming and Arizona.
Habitat: Disturbed places, fields, grassland, pastures, roadsides, orchards, vineyards, landscaped areas, and gardens. Smooth catsear also invades agricultural fields and can grow in serpentine soil. Common catsear is more drought-tolerant and can be found in turf.
Origin: Both species are native to Europe.
Impacts: The catsears move into overgrazed pastures and rangeland, crowding out palatable forage species.
Western states listed as Noxious Weed: *H. radicata,* Washington
California Invasive Plant Council (Cal-IPC) Inventory: *H. glabra*, Limited Invasiveness; *H. radicata*, Moderate Invasiveness

The catsears superficially resemble dandelion, with milky juice, a basal rosette of leaves, and yellow dandelion-like flowerheads. However, the catsears have branched flowering stems, unlike dandelion, and dandelion has "rocket"-shaped leaves with sharp lobes pointed back toward the base.

Smooth catsear is an annual with flower stems to 16 inches tall, with a slender taproot. Its leaves are hairless, with smooth to shallow-lobed margins. Common catsear is a perennial with flower stems to 32 inches tall, with a fibrous root system often with several deep roots. It has toothed to lobed leaves covered with rough, yellowish hairs. Both plants grow as prostrate rosettes on open ground, sending up leafless, usually branched flowering stems.

Both catsears produce plumed seeds which are distributed by wind or by clinging to the fur, feathers, and feet of animals. Seeds generally do not persist in the soil seedbank. In heavily grazed areas or mowed turf, common catsear can reproduce vegetatively by offsets from the crown, and diffuse clonal patches can develop. However, root fragments don't regenerate when detached from the crown.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	Hand removal and cultivation can control both species. Common catsear is more difficult, as it has a taproot which can resprout. If the entire taproot can be removed, as with a shovel, to several inches below the root crown, common catsear will not grow back. Mowing is not effective in controlling catsear.
Cultural	Light to moderate grazing usually facilitates survival of these species. Burning can stimulate germination of common catsear and probably smooth catsear seed.
Biological	No known biocontrol agents are available for either species of *Hypochaeris*.

CHEMICAL CONTROL

The following specific use information is based on published papers and reports by researchers and land managers. Other trade names may be available, and other compounds also are labeled for this weed. Directions for use may vary between brands; see label before use. Herbicides are listed by mode of action and then alphabetically. The order of herbicide listing is not reflective of the order of efficacy or preference.

GROWTH REGULATORS	
2,4-D Several names	**Rate:** 1 to 2 qt product/acre (0.95 to 1.9 lb a.e./acre) **Timing:** Postemergence to rosettes; most effective on smaller plants. **Remarks:** Broadleaf-selective, no soil activity. Common catsear may require repeat application. Not the most effective treatment, but widely used because of low cost. Do not apply ester formulations when outside temperatures exceed 80°F. Recommended rates are based on those reported for similar species.
Aminocyclopyrachlor + chlorsulfuron *Perspective*	**Rate:** 3 to 4.5 oz product/acre **Timing:** Postemergence in spring up to flowering, or at the fall rosette stage. **Remarks:** Provides broad-spectrum control of many broadleaf species. Although generally safe to grasses, it may suppress or injure certain annual and perennial grass species. Do not treat in the root zone of desirable trees and shrubs. Do not apply more than 11 oz product/acre per year. At this high rate, cool-season grasses will be damaged, including bluebunch wheatgrass. Not yet labeled for grazing lands. Add an adjuvant to the spray solution. Recommended rates are based on those reported for similar species. This product is not approved for use in California and some counties of Colorado (San Luis Valley).
Aminopyralid *Milestone*	**Rate:** 5 to 7 oz product/acre (1.25 to 1.75 oz a.e./acre) **Timing:** Apply in winter to early spring for preemergence and seedling treatments, or in spring up to flower bud stage. Can be applied in fall in cold-winter areas. **Remarks:** Broadleaf herbicide like picloram, but more selective. Safe on grasses. Longer residual and higher activity than clopyralid. Recommended rates are based on those reported for several perennial thistle species.
Aminopyralid + 2,4-D, *Forefront HL*; Aminopyralid + metsulfuron, O*pensight*; Aminopyralid + triclopyr, *Capstone*	**Rate:** 1.2 to 2 pt *Forefront HL/*acre; 2.5 to 3.3 oz *Opensight/*acre; 4 to 6 pt *Capstone*/acre **Timing:** Postemergence from rosette to bolting stages. *Opensight* may also be applied in fall to seedlings and rosettes. **Remarks:** Rates for *Forefront HL* and *Capstone* are based on label rates for similar species. *Opensight* is not registered for use in California.
Clopyralid *Transline*	**Rate:** 0.67 to 1.33 pt product/acre (4 to 8 oz ae/acre) **Timing:** Postemergence in spring, up to the flower bud stage. **Remarks:** A broadleaf herbicide like picloram, but more selective. Very safe on grasses. Relatively long residual. Recommended rates are based on those reported for similar species.
Clopyralid + 2,4-D *Curtail*	**Rate:** 2 to 3 qt *Curtail/*acre (use higher rate if plants are drought-stressed) **Timing:** Postemergence to rapidly growing weeds from full rosette to early flower bud. **Remarks:** This mix is broadleaf-selective with a wide range of susceptible species. Recommended rates are based on those reported for similar species.
Dicamba *Banvel, Clarity*	**Rate:** 1 to 2 pt product/acre (0.5 to 1 lb a.e./acre) **Timing:** Postemergence to rapidly growing plants in the rosette stage. Smaller plants are more easily controlled. **Remarks:** Broadleaf-selective herbicide often combined with other active ingredients. It is effective earlier in the season than 2,4-D. It is also effective when tank-mixed with 2,4-D (0.75 lb a.e./acre dicamba + 0.25 lb a.e./acre 2,4-D). Dicamba has very limited soil residual. Avoid drift to sensitive crops. Do not apply when outside temperatures exceed 80°F. It can kill or injure legumes. Recommended rates are based on those reported for similar species. Dicamba is available mixed with diflufenzopyr in a formulation called *Overdrive*. Diflufenzopyr is an

	auxin transport inhibitor which causes dicamba to accumulate in shoot and root meristems, increasing its activity. *Overdrive* is applied postemergence at 4 to 8 oz product/acre to rapidly growing weeds. Higher rates should be used on large annuals or on perennial weeds. Add a non-ionic surfactant to the treatment solution at 0.25% v/v or a methylated seed oil at 1% v/v solution.
Fluroxypyr *Vista XRT*	**Rate:** 22 oz product/acre (7.7 oz a.e./acre) **Timing:** Postemergence to rapidly growing plants. **Remarks:** Fluroxypyr is broadleaf-selective and safe on most grasses.
Picloram *Tordon 22K*	**Rate:** 1 to 2 pt product/acre (4 to 8 oz a.e./acre) **Timing:** Postemergence in the rosette to flower bud stage in spring, or to new rosettes in fall. **Remarks:** Long soil residual. Most broadleaf plants are susceptible; relatively safe on established grasses but can injure young or germinating grasses. Also effective mixed with dicamba or 2,4-D. Recommended rates are based on those reported for several perennial thistle species. Picloram is a restricted use herbicide. Not registered for use in California.
Triclopyr *Garlon 3A, Garlon 4 Ultra*	**Rate:** 2 pt product/acre (0.75 lb a.e./acre *Garlon 3A*, 1 lb a.e./acre *Garlon 4 Ultra*) **Timing:** Postemergence to rapidly growing plants. **Remarks:** Triclopyr is broadleaf-selective and safe on most grasses. It is most effective on smaller plants. *Garlon 4 Ultra* is formulated as a low volatile ester. However, in warm temperatures, spraying onto hard surfaces such as rocks or pavement can increase the risk of volatilization and off-target damage. Recommended rates are based on those reported for similar species.
Triclopyr + 2,4-D *Crossbow*	**Rate:** 2 to 4 qt product/acre **Timing:** Postemergence in the rosette stage. **Remarks:** Include non-ionic surfactant. Recommended rates are based on those reported for similar species.
AROMATIC AMINO ACID INHIBITORS	
Glyphosate *Roundup, Accord XRT II*, and others	**Rate:** 1.33 to 2.67 qt product (*Roundup ProMax*)/acre (1.5 to 3 lb a.e./acre) **Timing:** Postemergence to rapidly growing plants from rosette to bud stage. **Remarks:** Glyphosate has no soil activity and is nonselective. Repeat applications may be necessary. Effectiveness is increased by addition of ammonium sulfate.
BRANCHED-CHAIN AMINO ACID INHIBITORS	
Chlorsulfuron *Telar*	**Rate:** 1 to 2.6 oz product/acre (0.75 to 1.95 oz a.i./acre) **Timing:** Postemergence in fall to new rosettes, or to rosettes in spring before bolting. **Remarks:** Mixed selectivity, generally safe on grasses, but fall application may injure bromes. It has fairly long soil residual activity. Use a surfactant. Can be used in late season applications to reduce seed production. Recommended rates are based on those reported for similar species.
Imazapyr *Arsenal, Habitat, Stalker, Chopper, Polaris*	**Rate:** 2 to 3 pt product/acre (0.5 to 0.75 lb a.e./acre) **Timing:** Preemergence or postemergence. **Remarks:** Nonselective. Recommended rates are based on those reported for similar species.
Metsulfuron *Escort*	**Rate:** 0.5 to 1 oz product/acre (0.3 to 0.6 oz a.i./acre) **Timing:** Postemergence to young, rapidly growing plants in spring before flowering, or in fall to new rosettes. **Remarks:** Mixed selectivity, generally safe on grasses. Metsulfuron has some soil residual activity. Use a surfactant. It can be tank-mixed with 2,4-D and/or dicamba. Recommended rates are based on those reported for several perennial thistle species. Not registered for use in California.
Metsulfuron + chlorsulfuron *Cimarron X-tra*	**Rate:** 0.5 to 1 oz product/acre **Timing:** Postemergence before flowering. **Remarks:** Recommended rates are based on those reported for similar species. Not registered for use in California.
Sulfometuron	**Rate:** 3 to 5 oz product/acre (2.25 to 3.75 oz a.i./acre)

Oust and others	**Timing:** Preemergence or early postemergence when weeds are germinating or rapidly growing. **Remarks:** Mixed selectivity, fairly long soil residual. It is fairly safe on native perennial grasses, especially wheatgrass. It is also safe on smooth brome. Other desirable grasses may be stunted, stressed, or injured. Good for revegetation use. Do not let spray drift onto sensitive crops. Recommended rates are based on those reported for similar species.
PHOTOSYNTHETIC INHIBITORS	
Hexazinone *Velpar L*	**Rate:** 4 to 6 pt product/acre (1 to 1.5 lb a.i./acre) **Timing:** Preemergence before weeds emerge or postemergence to young plants. **Remarks:** Both foliar and soil activity. In soil applications, rates will vary with soil texture and soil organic matter; best results if applied when soil is moist. Hardwood trees near application site can absorb this chemical through the roots and may be injured or killed. Do not spray near the root zone of desirable hardwood trees or shrubs. High rates of hexazinone can create bare ground, so only use high rates in spot treatments.

RECOMMENDED CITATION: DiTomaso, J.M., G.B. Kyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center, University of California. 544 pp.