

UC SANTA CRUZ CAMPUS NATURAL RESERVE

HARLEQUIN LOTUS; WITCH'S TEETH



Tiffany Theden

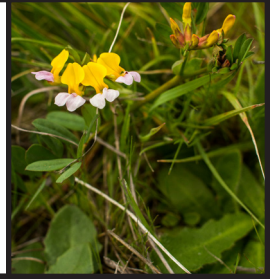
Scientific Name: *Hosackia gracilis*

Common Name(s): Harlequin Lotus, Seaside Bird's Foot Trefoil, Witch's Teeth

Global Rarity: Apparently Secure

State listing: Vulnerable; CNPS 4.2=Limited Distribution

UCSC Rarity: Uncommon



General Description

A member of coastal grassland and prairie ecosystems, the Harlequin Lotus' inflorescence contains 3-9 individual flowers that grow in a semi-circular shape. As a member of the pea family, this plant sports eye-catching yellow and pink pea-like flowers. The upper banner petal is a bright yellow, while the lower wing and keel petals are a light pink that fade with age. The pinnately compound leaves are arranged alternately along the stem and have oval-shaped individual leaflets. As a low growing, sprawling ground cover, individual plants rarely reach more than 2 ft wide and 1 ft tall. Look for them intermixed with other native wildflowers in coastal meadows in spring.

Identification

Flower Color: yellow & pink/white

Flower Shape: pea-like (banner & wings)

Bloom Period: March - June

Leaf Shape: pinnately compound/oval leaflets

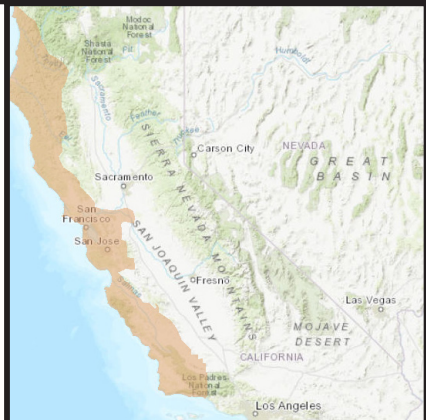
Leaf Arrangement: usually alternate

Habit: low, spreading, perennial herb



Geographic Range

The Harlequin Lotus is a predominantly coastal species, with a range spanning from British Columbia, where it is considered Endangered, down through coastal California to San Luis Obispo County. In the Santa Cruz area, they are found in moist coastal meadows.





UCSC Distribution

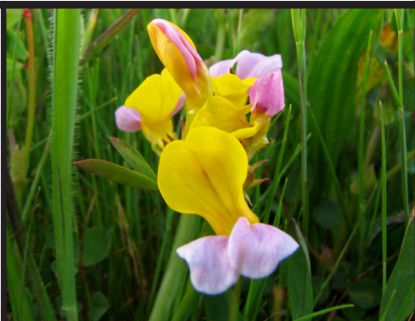
The Harlequin Lotus can be found in the grassy meadows and coastal prairies of UCSC's Upper Campus and the Mima Meadow.

Life history

The Harlequin Lotus is found in moist open habitats, from the edges of forests out into open meadows and wetlands. They occur from coastal mountains to the bluffs overlooking the sea. This plant is perennial, but is winter dormant, so the aboveground parts die off each winter. As temperatures warm, underground rhizomes resprout and new plants spring to the surface. These shoots spread to form a leafy mat up to 2ft wide, then start to flower. Harlequin Lotus is a nectar source for Painted Lady (*Vanessa cardui*) butterflies and a variety of native bees and other insects. It produces few seeds in little legume pods, which may be a cause for its limited distribution, but it does spread by underground rhizomes or aboveground stolons.

Research Highlights and Fun Facts

- Possible food plant for the Federally Endangered Lotus Blue butterfly caterpillar. This butterfly has not been seen since 1983 and may be extinct.
- Designated as a plant with Special Value to Native Bees by the Xerces Society.
- Has many common names for such an uncommon plant: Coast Lotus, Bicolor Lotus, Meadow Lotus, Coast Trefoil, Seaside Bird's Foot Trefoil, Western Trefoil.
- Also known as Witch's Teeth. Who knew witches had such beautiful teeth?

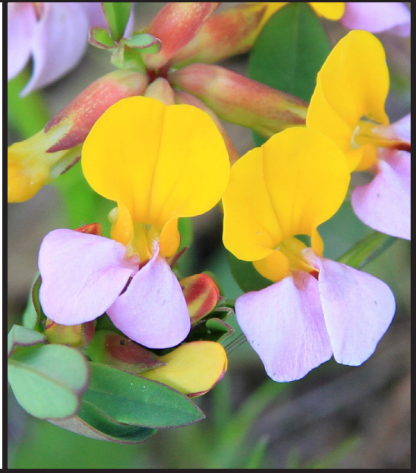


Note that permits are required to collect rare plant seeds or parts.

Conservation Status

Apparently Secure in California; Limited Distribution

The California Native Plant Society 4.2 (Limited Distribution) ranking places this species on a Watch List. Though this plant isn't rare on a state-wide level at this point, they warrant close monitoring to determine the trajectory of their status.



Threats

Statewide:

1. Habitat loss, degradation, and fragmentation from development, agriculture and grazing
2. Competition with non-native and invasive plants
3. Feral pigs
4. Lack of fire which allows woody plant succession

UCSC campus:

1. Reduction of prairie and meadow habitat by encroaching woody plants
2. Off trail travel/trampling
3. Potential future development projects

Ways you can help

In your community:

1. Buy and plant responsibly sourced California native plants at your home
2. Support the California Native Plant Society and volunteer with habitat restoration projects
3. Don't hike or bike off-trail in fragile coastal prairie ecosystems
4. Document the plants you encounter with iNaturalist



References and Photo Credits

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 22 January 2021].

California Native Plant Society. Seaside Bird's Foot Trefoil, *Hosackia gracilis*. Calscape. [https://calscape.org/Hosackia-gracilis-\(\)](https://calscape.org/Hosackia-gracilis-()), accessed on January 22, 2021.

Jeffery (Immel), D., C. Luke, K. Kraft. Last modified February 2020. California's Coastal Prairie. A project of the Sonoma Marin Coastal Grasslands Working Group, California. Website: www.cnga.org/prairie.

Luc Brouillet 2012, *Hosackia gracilis*, in Jepson Flora Project (eds.) Jepson eFlora, https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=28441, accessed on January 22, 2021.

NatureServe Explorer. 2021. Lotus formosissimus Seaside Trefoil. Retrieved from https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.137081/Lotus_formosissimus on 25 May 2021.

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