UC SANTA CRUZ CAMPUS NATURAL RESERVE

LEPTONIA CARNEA

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Scientific Name: *Leptonia carnea*

Common Name: No common name (yet!)

Global Rarity: Unknown

IUCN Listing: Vulnerable and decreasing

State Listing: Unknown

UCSC Rarity: Uncommon to rare

General Description

It's a real treat to encounter this delightful blue mushroom in the understory of the redwood forest. They are usually found singly or in small groups, and seem to prefer moderately disturbed areas near trails. When dry, the cap and stipe are slightly sparkly/metallic, making this spectacular species even more beautiful. *Leptonia pigmentosipes* is similar looking, but has whiter gills and a hollow stipe.

Identification

Cap: Indigo to navy to darkish royal blue; can look metallic

Stipe: Similar color to cap; shaggy/patterned, not hollow

Gills: Pale gray-lavender to pink

Spore print: Dull/dingy pinkish

Taste: Somewhat like raw potato, raw dough ("farinaceous")

Habitat: Thick duff, usually redwood

Geographic Range

From Humboldt County to Monterey County in California. *L. carnea* occurs almost only in Coast Redwood (*Sequoia sempervirens*) forests along the coast. There has been one recorded occurrence in a grove of Monterey Cypress (*Hesperocyparis macrocarpa*) and one unconfirmed occurrence in Washington state. Has been seen at <50 sites in total.

UCSC Distribution

Occurs at several spots around central campus. Has been seen multiple places around Science Hill, near the Kresge apartments, and by Stevenson Cafe.

Life History

The life history strategy of this fungi is one of a saprobe: breaking down and recycling various plant materials on the forest floor. It is found mostly in moderately disturbed habitats near trails and footpaths, almost always in thick redwood duff. Some years it seems abundant, while in others it may be incredibly rare. It seems to prefer the cooler, wetter parts of the year (Jan-March).

Research Highlights & Fun Facts

- This is one of the mushrooms featured on the cover of *Mushrooms of the Redwood Coast* (Seigel and Schwarz 2016).
- One of the easiest places in the world to see this mushroom may actually be on the UCSC campus around Science Hill!
- *Leptonia* is a subdivision of *Entoloma*. Some authors classify this species as *Entoloma subcarneum*. But, based on phylogenetic and morphological data, there is evidence that supports finer divisions to the genera in the Entolomataceae family, and seperating *Leptonia* from *Entoloma*.

Conservation Status

IUCN Red List Category: Vulnerable

IUCN Red List Criterion: C2a(i)

The population size of this species is less than 10,000 mature individuals in total, is probably currently in decline, and no subpopulations have been found that contain more than 1,000 mature individuals

Threats

Statewide:

1. The main threat is habitat loss, so any threats to the 450 mile long belt of coastal redwood forests are threats to *L. carnea*
2. Drought stress on trees from decreasing summer fog and sporadic winter rain
3. Logging and the resulting fragmentation of redwood forest habitat

UCSC campus:

1. Development projects that increase habitat fragmentation
2. Climate change and drought stress

Ways you can help

1. Take up mushroom hunting as a hobby - you might just find some rare ones!
2. Buy responsibly sourced lumber that doesn't support clearcutting
3. Decrease carbon emissions and help slow climate change
4. Document the fungi you encounter with iNaturalist

References and Photo Credits

Siegel, N. and C. Schwarz. 2016. *Mushrooms of the Redwood Coast: A comprehensive guide to the fungi of coastal northern california.* (1st ed.). Ten Speed Press, Berkeley. 211 pp.

The Global Fungal Red List Initiative. (2021). *Leptonia carnea.* http://iucn.ekoo.se/iucn/species_view/316609/. Accessed on 06 February 2021.

Vellinga, E. (2015). *Leptonia carnea.* The IUCN Red List of Threatened Species 2015: e.T76256454A97168155. https://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T76256454A76256457.en. Downloaded on 30 January 2021.

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WARNING

Never eat a mushroom you are unsure of. If you think you have eaten a toxic mushroom contact Poison Control at: 1-800-222-1222 or poison.org