

# NATURAL MUTATIONS OF CALIFORNIA PLANTS

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Different forms of plant mutations were observed in California. The most common mutation observed is fasciation, and it was recorded for both native and non-native species. Other types of mutations observed were: phyllody, homeosis, albinism, whorled phyllotaxy, curled leaves, and variegation. Plant mutations can have hormonal, genetic, bacteria, fungal, viral, and environmental causes and provide interesting material for genetic studies. The examples shown do not represent a comprehensive collection of mutations, many more exist in nature.

**Fasciation** is when the apical meristem (growing tip) becomes elongated perpendicular to the direction of growth, producing flattened, contorted tissue. As a result, stems and other organs become flattened.



*Clarkia unguiculata*



*Chlorogalum pomeridianum*



*Verbascum thapsus*



*Heliotropium curassavicum*



*Hypochaeris radicata*



*Grindelia stricta* var. *platyphylla*



*Tragopogon porrifolius*



*Acmispon glaber*



*Mentha pulegium*

**Albinism** is a lack of pigmentation.



*Calandrinia ciliata*



*Sisyrinchium bellum*



*Trifolium barbigerum*



*Phacelia ciliata*

**Phyllody** is the abnormal development of floral parts into leafy structures.



*Hirschfeldia incana*



*Eryngium spinosepalum*



*Dipsacus fullonum*

**Variegation** is the appearance of different colored zones on the leaves.



*Abronia villosa*



*Ranunculus californicus*



*Rosa gymnocarpa*

**Homeosis** is the transformation of one organ to another, for instance, petal to sepal.

**Whorled phyllotaxy** is the growth of three leaves from each node instead of the typical two.



*Urtica dioica*



*Stachys ajugoides* ssp. *rigida*

**Curly leaves**



*Polystichum munitum*

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