

Sierra Nevada (And central Coast Ranges?) (And Transverse Ranges?) Phacelia Humiles key (with some from elsewhere)

Location Key:

SN - Sierra Nevada
WSN - West Sierra Nevada
NSN - North Sierra Nevada
SSN - South Sierra Nevada
ESN - East Sierra Nevada
NESN - Northeast Sierra Nevada
SESN - Southeast Sierra Nevada
MP - Modoc Plateau
GB - Great Basin
K - Klamath Mountains
CR - Coast Ranges
TR - Transverse Ranges

E/W Boundary is the Sierra Crest Watershed Divide

N/S Boundary is Yosemite Valley

Disclaimer: the *P. curvipes*/*dauidsonii* complex is not included in this key :(

Links for helpful pics to be added soon

Measurements are based on Jepson manual species descriptions

I tried to avoid using location/habitat in the forks, but if the keyed taxon does not list the region the specimen being keyed is in, then they most likely do not match

1. Corolla opaque, deep purple with solid white center
 2. White center circular, not extending into limbs [K] - *P. greenei*
 - 2' White center extending into limbs [SSN] - *P. orogenes*
- 1' Corolla any other color (including lighter purple)
 3. Leaves linear or lanceolate, petioles usually not very clearly defined (leaves often sessile or subsessile), may be lobed
 4. Leaves flat and narrow, margins barely revolute if at all, with an impressed midrib and usually no other impressed veins
 5. Corolla purple/violet, tube base white, mostly opaque or translucent, often with a line down the center of each petal [ESN, MP, GB] - *P. humilis* (2)
 - 5' Corolla pink to white
 6. Corolla miniscule, 2-5 mm
 7. Corolla tubular, white (sometimes with a purple tint), sometimes transparent between veins - *P. racemosa*
 - 7' Corolla campanulate to rotate, white, tip of limb may be light purple, base of tube may be yellow, mostly transparent/translucent with opaque veins [WSN, (ESN near Lake Tahoe)] - *P. eisenii* (in part)
 - 6' Corolla 5-8 mm

8. Corolla rotate, transparent with pink opaque veins creating four transparent chambers on each petal between veins [SSN, TR] - *P. exilis* (2)

8' Corolla campanulate to rotate, transparent with white to purple opaque veins creating two main transparent chambers on each petal between veins, corolla tube base yellow [TR] - *P. mohavensis*

4' Leaf margins strongly revolute, often with impressed veins extending from the midrib

9. Corolla campanulate, translucent, violet-lavender [North of Kings River WSN, (ESN near Lake Tahoe)] - *P. quickii*

9' Corolla rotate

10. Corolla transparent with pink veins creating four transparent chambers on each petal between veins [SSN, TR] - *P. exilis* (2)

10' Corolla opaque, usually white center fading to pink limbs, with a pink line down the center of each petal [NESN, MP, GB, K] - *P. linearis*

3' Leaves elliptic to ovate, subsessile or petioled, may be lobed, with impressed veins

11. Leaves lime green, +- flat to concave, margins always entire and usually not revolute in the slightest (though sometimes wavy), may or may not have a defined petiole [ESN, MP, GB] - *P. humilis* (2)

11' Leaves flat to somewhat convex, sometimes with revolute or at least slightly rounded off margins, entire or lobed, defined petiole that may <, =, or > blade

12. Stamens included, equaling, or barely exceeding corolla

13. Corolla campanulate to rotate [WSN, (ESN near Lake Tahoe)] - *P. eisenii* (in part)

13' Corolla funnelform

14. Corolla opaque, bright purple/violet, stamens included - *P. vallicola*

14' Corolla transparent to translucent with opaque veins

15. Calyx lobes often very unequal, usually spreading, may exceed corolla, corolla veins white near base of tube, light purple in limbs; leaves lanceolate to elliptic, margins entire or lobed [SSN, GB, TR] - *P. austromontana*

15' Calyx lobes often exceeding corolla; leaves elliptic to ovate, margins entire [SESN] - *P. novemmillensis*

12' Well exerted stamens

16. Dark violet corolla [NSN] - *P. marcescens*

16' Lighter, translucent to transparent corolla

17. Corolla rotate, very open [WSN] - *P. eisenii* var. *brandegeana*

17' Corolla campanulate, limbs spreading or not

18. Corolla translucent, near white, very light pink, with short, linear calyx lobes that neatly and tightly hug the fruit [NSN] - *P. stebbinsii*

18' Corolla transparent with prominent opaque veins, limbs spreading, calyx lobes often spreading, oblanceolate to obovate with cupped/revolute margins

19. Veins purple (can be white near the center), base of tube may be yellow [SN] - *P. purpusii*

19' Veins gray to white [CR, TR] - *P. grisea*

Add: maybe *P. congdonii*, *P. divaricata* (entire leaves(mostly basal?)), *P. breweri* (pointy lobed leaves), *P. douglasii* (decumbent/spreading)(crenate? margins, lobed), *P. curvipes* (erect

leaves? mostly basal? Convex with revolute margins? Finely hairy(puberulent?)
(decumbent/spreading?(humilis is usually erect (in the north at least))

Corolla translucent to transparent with opaque veins, calyx lobes may be very unequal, often spreading, corolla veins white near base, purple in limbs

3-4 mm vs 3-6 mm

Corolla white, tip of limb may be light purple, base of tube may be yellow, mostly transparent/translucent with opaque veins, campanulate to rotate, very miniscule [WSN, (ESN near Lake Tahoe)]

1. Corolla opaque, deep purple with solid white center, and with a clear boundary separating the white center from the dark limbs- one does not grade into the other

2. White center circular, not extending into limbs [K] -

2' White center extending into limbs [SSN] -

1' Corolla any other color (including lighter purple)

Proximal leaves lobed with lobe sinuses extending more than halfway to the midrib

Leaves mostly with more than 5 lobes(some leaves on larger plants with 10 or more), often with sinuses extending to the midrib [SSN, CR, TR] - *P. douglasii*

#' Leaves mostly with 5 or less lobes

Corolla 4--6 mm [CR] - *P. breweri*

#' Corolla 7--15 mm [SSN, TR] - *P. davidsonii* (2)

#' Leaves entire, few lobed, or lobed(only the deepest lobe sinus rarely extending up to halfway to the midrib) (5 or less at the most)

3. Leaves linear, narrowly lanceolate or narrowly oblanceolate, both proximally and distally, petioles usually not very clearly defined, with leaf base gradually tapering into petiole(leaves often sessile or subsessile), only occasionally lobed, and occasionally with impressed veins extending from the midrib (though *P. linearis* has linear lobes on basal leaves)

4. Leaves flat and narrow, margins barely revolute if at all, with an impressed midrib and usually no other impressed veins

5. Corolla purple/violet, tube base white, mostly opaque or translucent, often with a line down the center of each petal [ESN, MP, GB] -

5' Corolla pink to white

6. Corolla miniscule, 2--5 mm

7. Corolla tubular, white (sometimes with a purple tint), sometimes transparent between veins -

7' Corolla campanulate to rotate, white, tip of limb may be light purple, base of tube may be yellow, mostly transparent/translucent with opaque veins [WSN, (ESN near Lake Tahoe)] -

6' Corolla 5--8 mm

8. Corolla rotate, transparent with pink opaque veins creating four transparent chambers on each petal between veins [SSN, TR] -

8' Corolla campanulate to rotate, transparent with white to purple opaque veins creating two main transparent chambers on each petal between veins, corolla tube base yellow [TR] -

4' Leaf margins strongly revolute, often with impressed veins extending from the midrib

9. Corolla campanulate, translucent, violet-lavender [North of Kings River WSN, (ESN near Lake Tahoe)] -

9' Corolla rotate

10. Corolla transparent with pink veins creating four transparent chambers on each petal between veins [SSN, TR] -

10' Corolla opaque, usually white center fading to pink limbs, with a pink line down the center of each petal [NESN, MP, GB, K] -

3' Leaves widely lanceolate or oblanceolate, elliptic, or ovate, with narrowly lanceolate/oblanceolate leaves occurring only distally if present, subsessile or petioled, may be lobed or entire, often with multiple impressed veins other than the midrib

11. Leaves lime green, +/- flat to concave, margins always entire and usually not revolute in the slightest (though sometimes wavy), may or may not have a defined petiole [ESN, MP, GB] -

11' Leaves flat to somewhat convex, sometimes with revolute or at least slightly rounded off margins, entire or lobed, defined petiole that may <, =, or > blade

12. Stamens included, equaling, or barely exceeding corolla

13. Corolla campanulate or rotate

1# Corolla mostly opaque with 5 distinct transparent patches directly above the scales near the base of the corolla

1# Corolla 10--15 mm, transparent patches usually tinted brown [CR] - P. divaricata

1# Corolla 6--10 mm, transparent patches with no unique pigment [SSN, TR] - P. congdonii (2)

1# Corolla lacking 5 patches near the base, but may have any other ratio of transparency to opacity

1# Corolla transparent to translucent, mostly white and occasionally grading into faint purple in the corolla limbs, campanulate or rotate, leaves not usually erect [WSN, (ESN near Lake Tahoe)] - P. eisenii (in part)

1# Corolla opaque to barely translucent, campanulate

1# Proximal leaf petioles > blade, corolla with white center grading into light purple or occasionally bright violet corolla limbs [SSN, TR] - P. congdonii (2)

1# Proximal petioles generally < blade, corolla with white center grading into bright violet corolla limbs

1# Leaves lobed or entire [SSN, TR] - P. davidsonii (2)

1# Leaves entire, mostly erect [ESN, SSN, TR] - P. curvipes

13' Corolla funnelform

14. Corolla opaque, bright purple/violet, stamens included -

14' Corolla transparent to translucent with opaque veins

15. Calyx lobes often very unequal, usually spreading, may exceed corolla, short-glandular, corolla veins white near base of tube, light purple in limbs; leaves lanceolate to elliptic, margins entire or lobed [SSN, GB, TR] -

15' Calyx lobes often exceeding corolla, long-ciliate ; leaves elliptic to ovate, margins entire [SESN] -

12' Well exerted stamens

1# Bright purple corolla

16. Dark violet corolla, glabrous filaments [NSN] -

1# Lighter violet corolla, hairy filaments - P. humilis (2)

16' Lighter, translucent to transparent corolla

17. Corolla rotate, very open [WSN] -

17' Corolla campanulate, limbs spreading or not

18. Corolla translucent, near white, very light pink, with short, linear calyx lobes that neatly and tightly hug the fruit [NSN] -

18' Corolla transparent with prominent opaque veins, limbs spreading, calyx lobes often spreading, oblanceolate to obovate with cupped/revolute margins

19. Veins purple (can be white near the center), base of tube may be yellow [SN] -

19' Veins gray to white [CR, TR] -