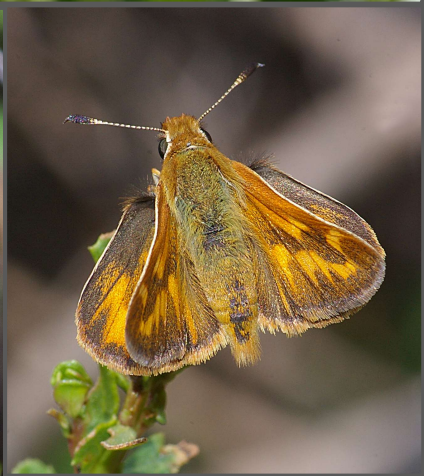
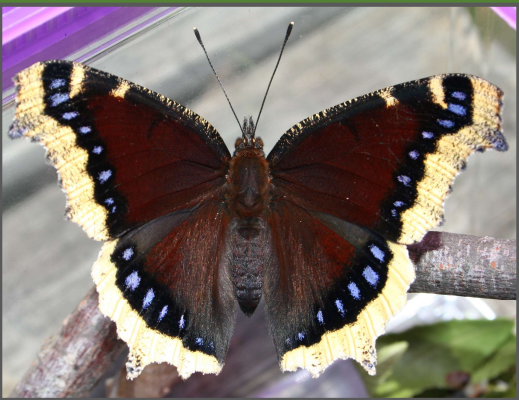


# Butterflies of Humboldt Bay



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# How to Use

- Users scroll to individual species or tap the butterfly name in the Table of Contents.
- Users return to the Table of Contents by touching the lower left corner.
- Species are organized into color coded families.
- The first page of each family lists key characteristics.
- Each species page includes:
  - Flight period: Typical months adults can be observed (may vary based on weather patterns)
  - Larval food: Substances that are consumed by larvae for nutrients
  - Adult food: Substances that are consumed by adults for nutrients
- Photos for most species will include views of both the dorsal and ventral sides, unless the species habitually perches with wings closed. In this case, both photos will show the ventral side.
- Maps are located at the bottom of each species page and these depict iNaturalist observations as of Spring 2024.

## Acknowledgements

All images were collected under a Creative Commons License or Public Domain

# What is a Butterfly?

Butterflies belong to the order Lepidoptera (Latin for “scale-wing”), which is a group of insects including butterflies and moths.

Butterflies fly during the day and typically have clubbed antennae.



Moth  
Antennae

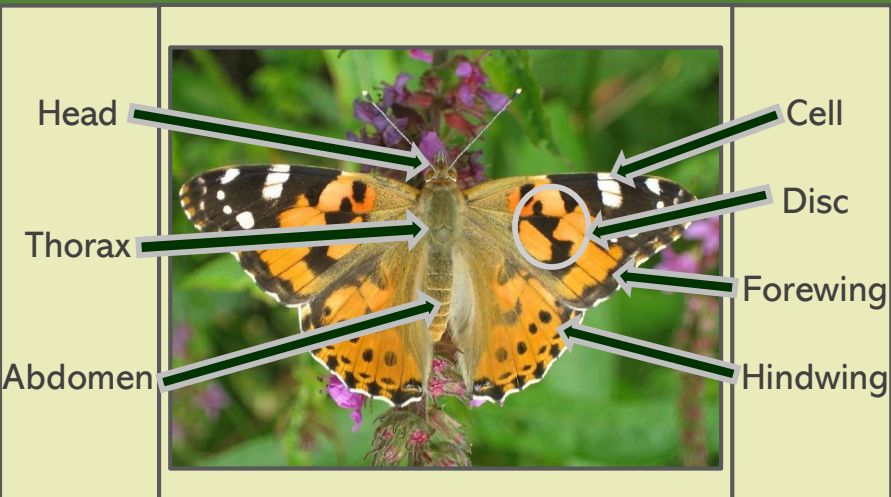


Butterfly  
Antennae

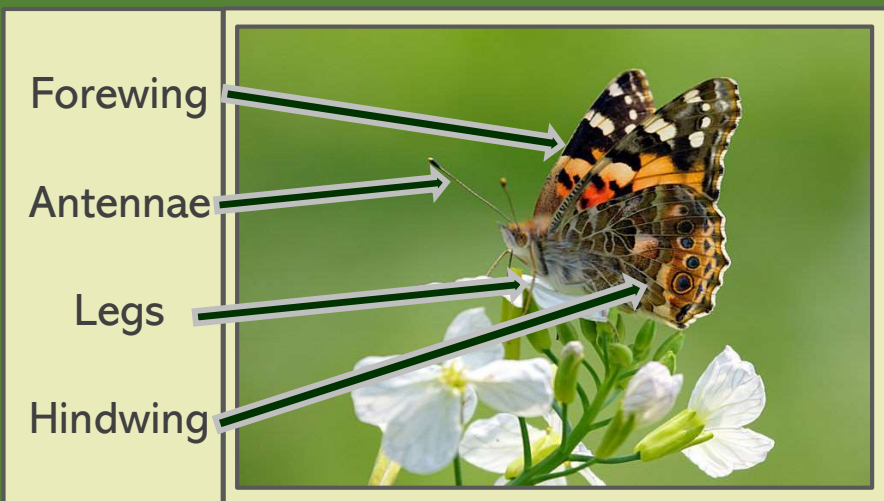


# Butterfly Anatomy

## Dorsal View



## Ventral View



# Anatomy Definitions

**Head:** Includes sensory organs including eyes and antennae is located above the thorax

**Thorax:** Section of the body located between the head and abdomen and is where the legs attach

**Abdomen:** Section of the body located below the thorax, this section contains vital organs

**Cell:** Any portion of the wing that is outlined by wing veins

**Disc:** Large central inner portion of the forewings and hindwings

**Forewings:** Two upper wings

**Hindwings:** Two lower wings

**Antennae:** Sensory appendage affixed to the head

**Legs:** Similar to other insects, butterflies have six legs

# Life Cycle

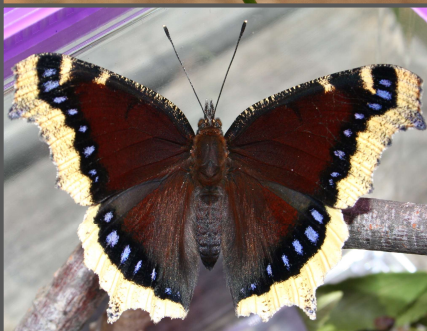
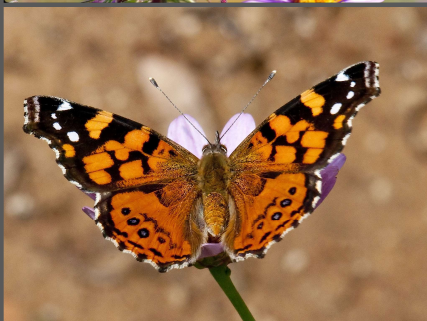
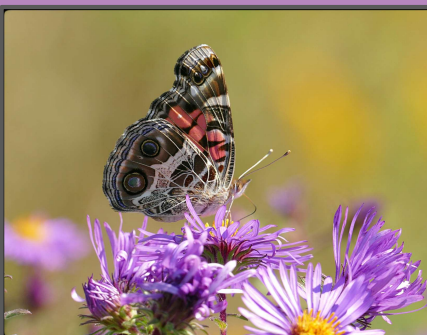
Butterflies and other Lepidoptera have a four-stage life cycle:

1. Egg
2. Larva (caterpillar)
3. Pupa (chrysalis)
4. Imago (adult)



# Brushfoot Family (Nymphalidae)

- These butterflies have four functional legs, compared to six in other families
  - Highly-reduced brush-like front pair of legs – “brushfeet”
- Predominantly orange, red, brown, black, a few with silver highlights
- Very diverse in species and in form
- Nearly 6,000 species in this family worldwide





# Red Admiral

(*Vanessa atalanta*)

## Flight Period:

May - Oct

## Larval food:

Stinging nettle

## Adult food:

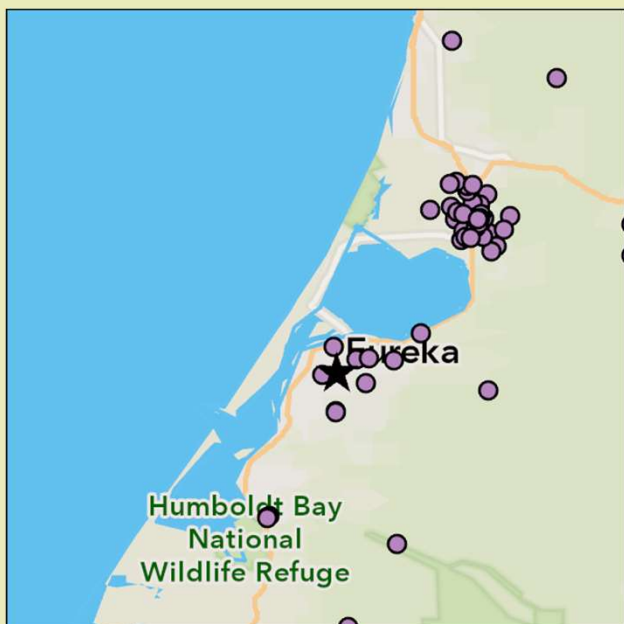
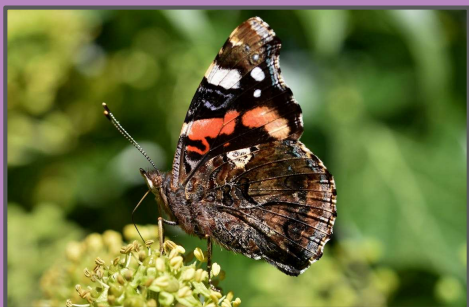
Bull thistle,  
buddleia, and  
oxeye daisy



Size: <2.5 inches

## Key characteristics:

Coal black with white  
apical spots similar to  
Lady butterflies  
(genus *Vanessa*)



# California Tortoiseshell (*Nymphalis californica*)

## Flight Period:

Jan - Dec

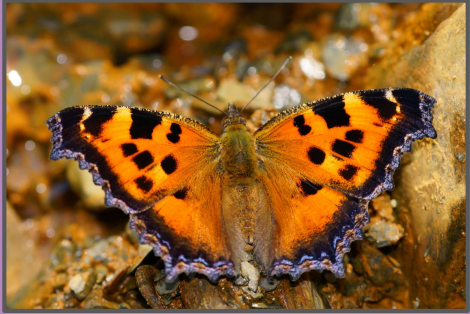
## Larval food:

Ceanothus  
species

## Adult food:

Spring –  
fir needle  
exudate

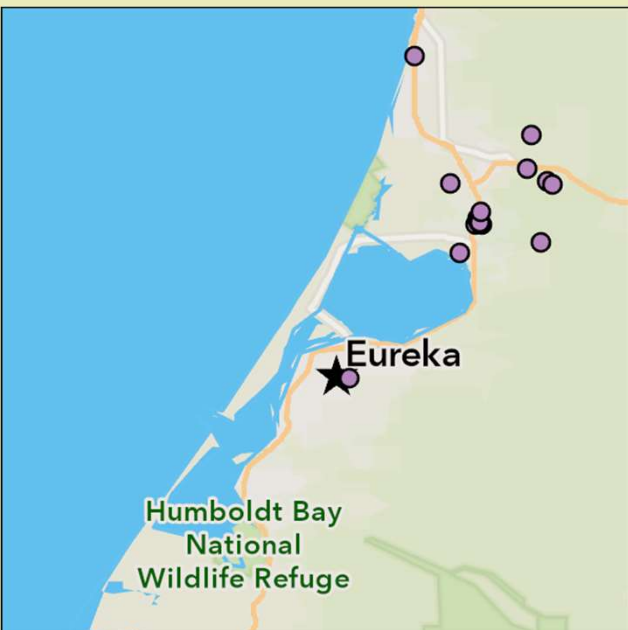
Fall –  
fir sap



Size: <2.5 inches

## Key characteristics:

big black spots on  
leading edges and  
small ones in  
middle



# Monarch

(*Danaus plexippus*)

## Flight Period:

June - Oct

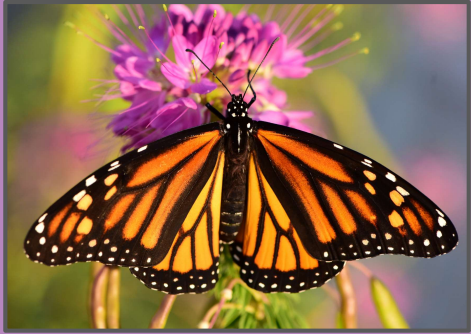
## Larval food:

Milkweeds

## Adult food:

Milkweeds,  
buddleia,  
clover, yarrow,  
asters

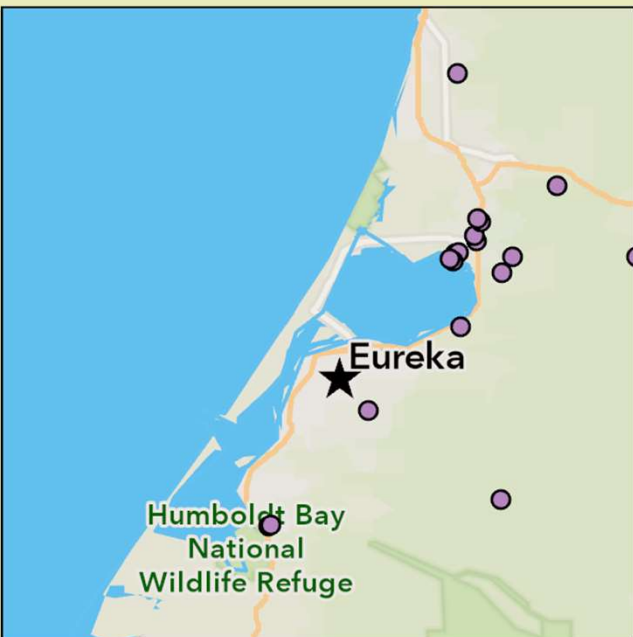
Note: Milkweeds  
do not grow  
natively around  
Humboldt Bay,  
so milkweed are  
best planted  
outside the fog  
belt



Size: >3 inches

## Key characteristics:

border has two rows  
of white dots;  
hindwing veins mostly  
vertical, no horizontal  
venation



# Gray Buckeye

(*Junonia grisea*)

## Flight Period:

May - Oct

## Larval food:

Penstemons,  
paintbrushes,  
veronicas,  
monkeyflowers

## Adult food:

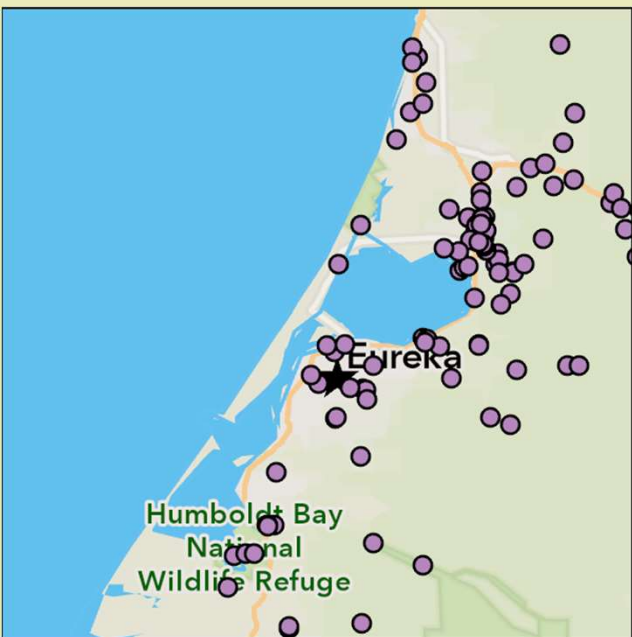
Goldenrods,  
sunflowers,  
asters



Size: <2.5 inches

## Key characteristics:

three to four large  
eyesspots on dorsal  
side





# Mourning Cloak

(*Nymphalis antiopa*)

## Flight Period:

Feb - Oct

## Larval food:

Willows,  
alders, birches,  
and maples

## Adult food:

Currants and  
asters

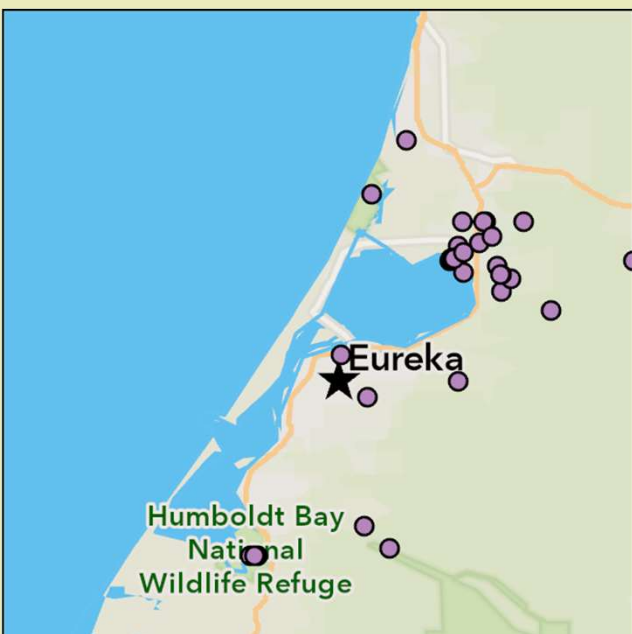
Note: One of  
the few  
butterflies that  
overwinters as  
an adult



Size: >3 inches

## Key characteristics:

Yellow borders and  
blue dots lining the  
inside



# Ochre Ringlet

(*Coenonympha californica*)

Flight Period:

Feb - Oct

Larval food:

Grasses

Adult food:

Cat's ear and  
asters

Notes:

Habitually  
lands with  
wings folded



Size: <1.25 inches

Key characteristics:

Ventral side has  
submarginal row of  
gray, zigzag  
chevrons



# Mylitta Crescent

(*Phyciodes mylitta*)

Flight Period:

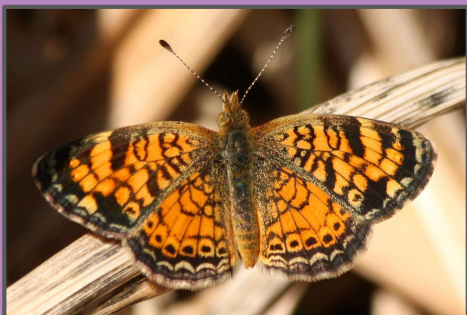
Feb - Oct

Larval food:

Canada thistle  
and star thistle

Adult food:

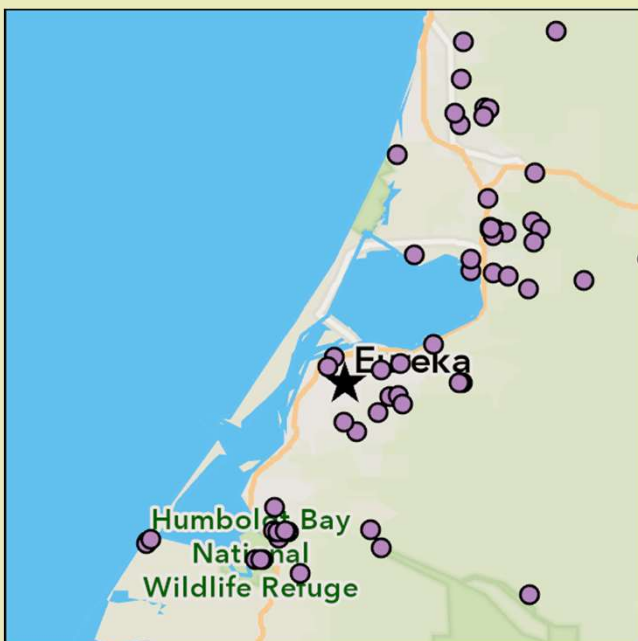
Canada thistle,  
star thistle,  
goldenrods,  
Douglas aster,  
and red clover



Size: < 1.5 inches

Key characteristics:

More orange than  
field crescent, no  
yellow cells



# Field Crescent (*Phyciodes pulchella*)

Flight Period:

May - Sep

Larval food:

Asters

Adult food:

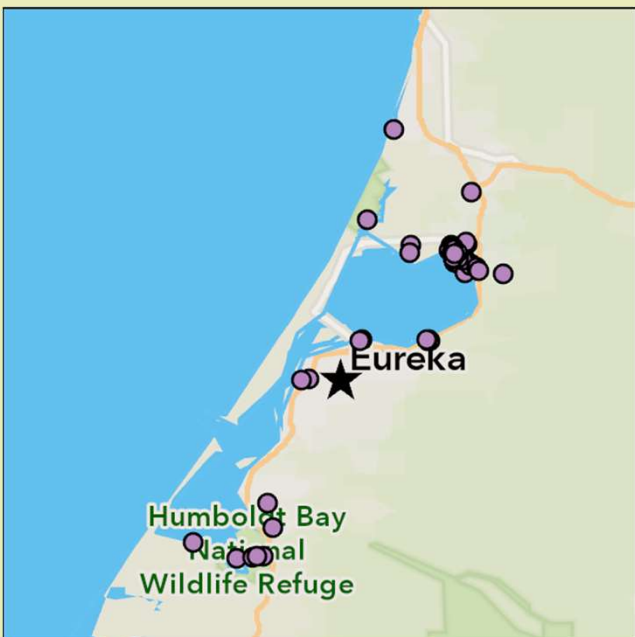
Asters and  
pearly  
everlasting



Size: <1 inch

Key characteristics:

Mix of brown, orange  
and yellow cells;  
ventral forewing has a  
strong pale bar at  
end of cell





# Painted Lady (*Vanessa cardui*)

## Flight Period:

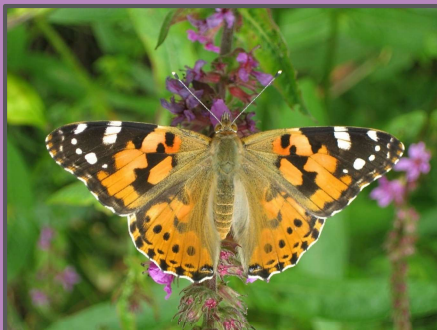
Mar - Nov

## Larval food:

Thistles,  
lupines, and  
mallows

## Adult food:

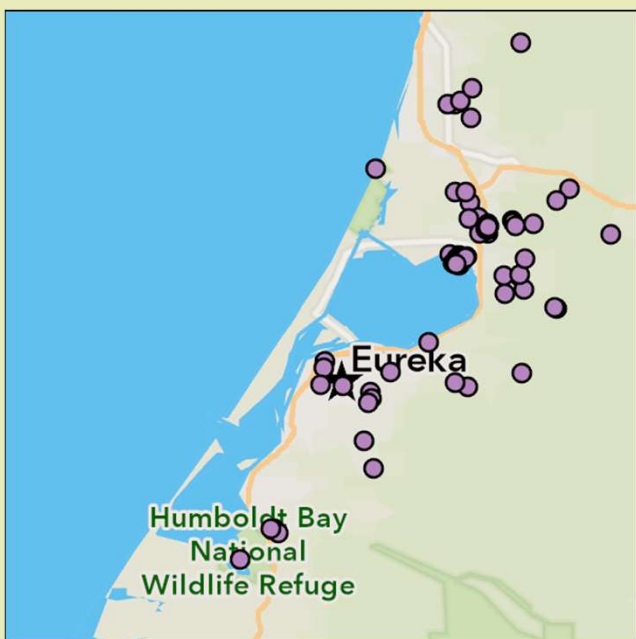
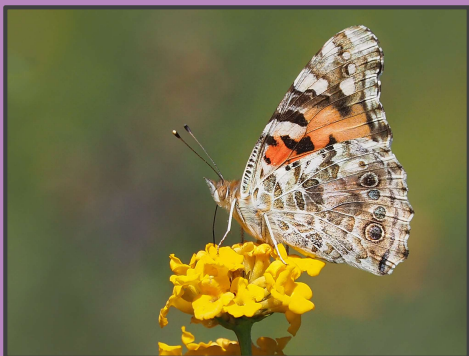
Asters, clovers,  
thistles



Size: <3 inches

## Key characteristics:

Four eyespots on  
underside of hindwing;  
large white cell next to  
edge of smaller white  
dots near tip of forewing



# American Lady (*Vanessa virginensis*)

## Flight Period:

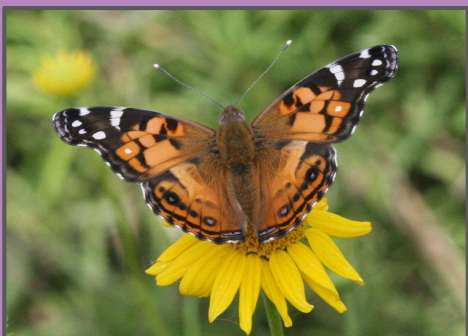
Apr - Nov

## Larval food:

Pearly  
everlasting,  
thistles

## Adult food:

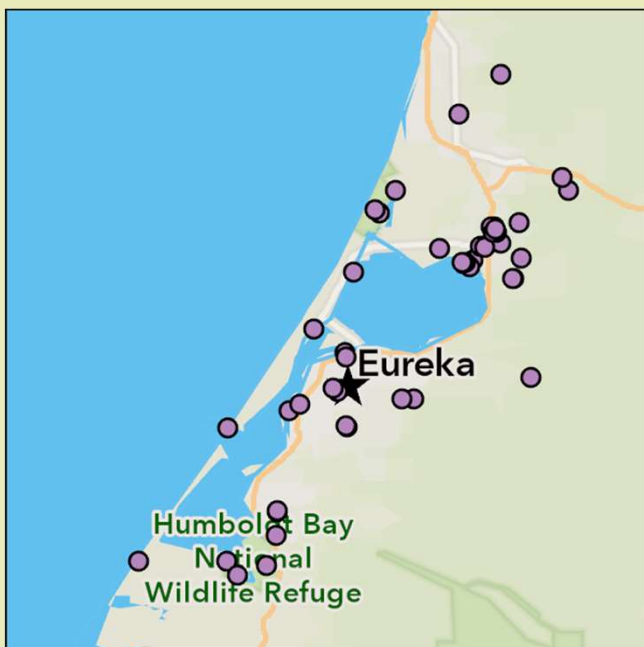
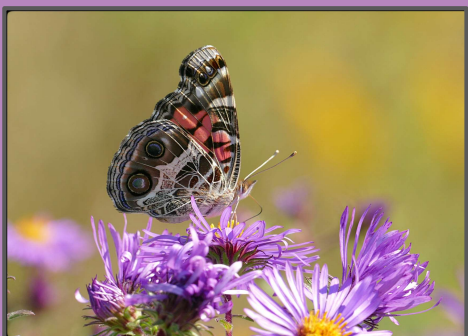
Asters,  
thistles, cat's  
ear



Size: <2.25 inches

## Key characteristics:

Two eyespots on  
underside of hindwing;  
white dot within the  
orange part of upper  
wing; two eyespots on  
underside of hindwing



# West Coast Lady (*Vanessa annabella*)

## Flight Period:

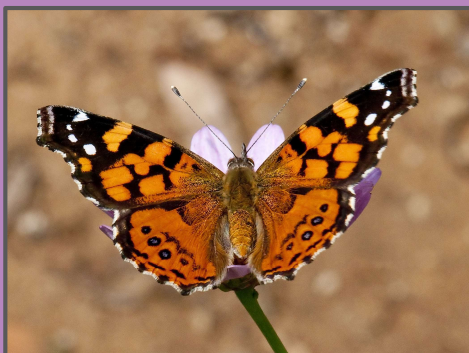
Mar - Nov

## Larval food:

Streambank  
mallow,  
hollyhock, and  
nettles

## Adult food:

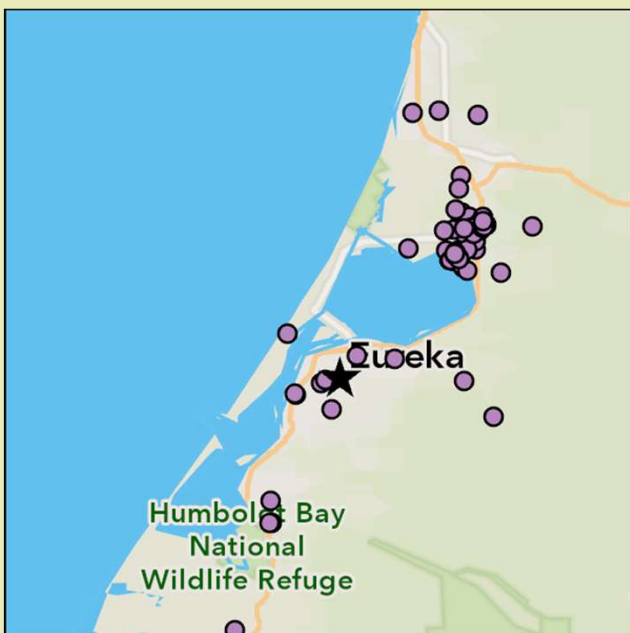
Gumweed,  
asters, thistles



Size: <2 inches

## Key characteristics:

Four eyespots on  
underside of hindwing;  
large orange cell next to  
edge of smaller white  
dots near tip of forewing  
(compare to Painted  
Lady)

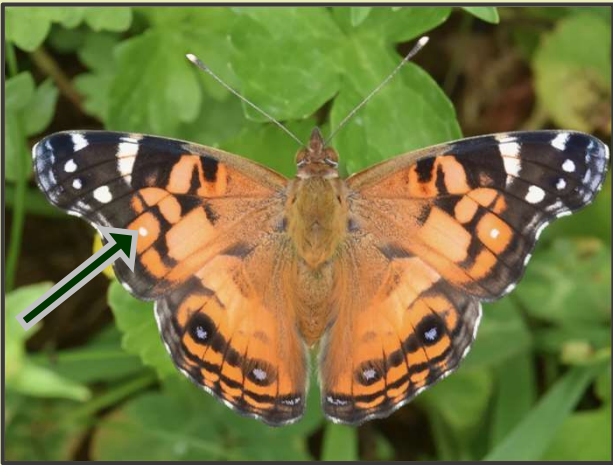


# Lady Differences



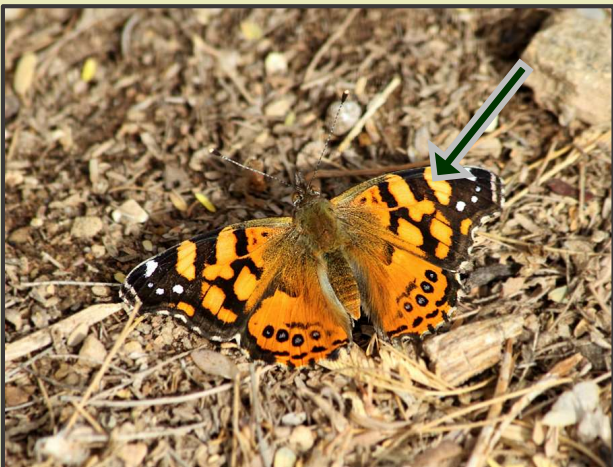
Painted Lady

- white cell on forewing and no white spot in orange



American Lady

- white cell on forewing and white spot in orange



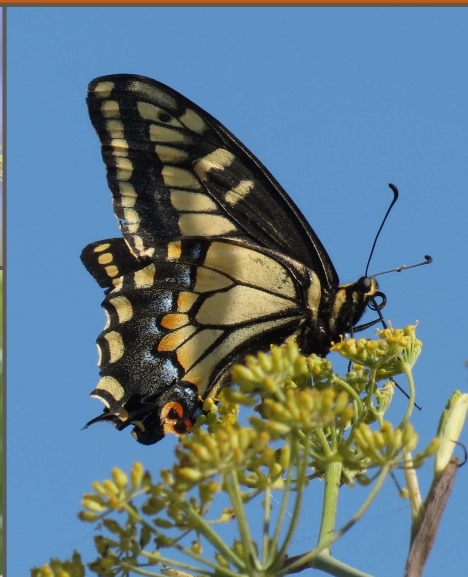
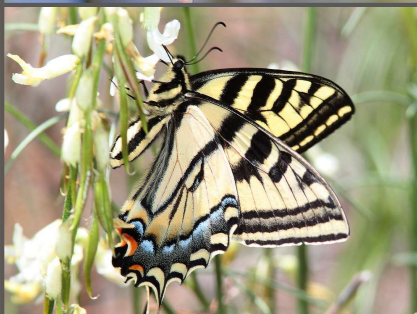
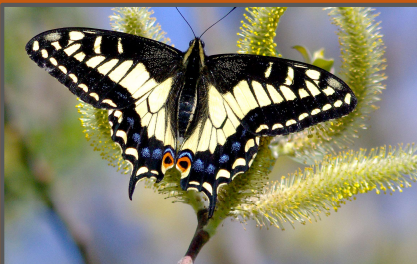
West Coast Lady

- orange cell on forewing



# Swallowtail Family (Papilionidae)

- Spectacular and striking adults
- Strong fliers
- Caterpillars have defensive scent organ called “osmeterium” which look like orange or red “horns”
- Found on all continents, except Antarctica
- Nearly 550 species in this family worldwide



# Anise Swallowtail

(*Papilio zelicaon*)

## Flight Period:

Feb - Sep

## Larval food:

Desert  
parsleys, cow-  
parsley, sea-  
watch, and  
fennel

## Adult food:

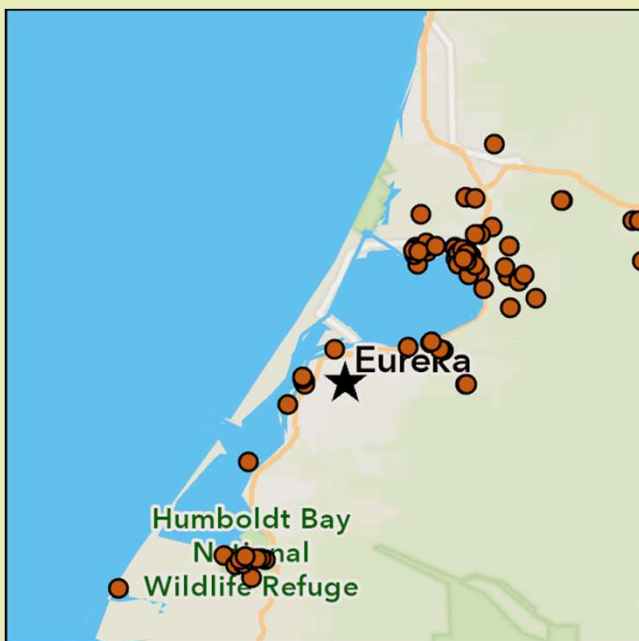
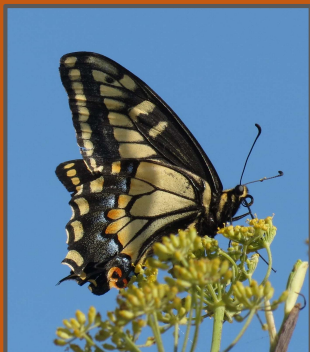
Lilac, lupine,  
azalea, yellow  
mustard,  
pearly  
everlasting,  
and thistles



Size: <3.5 inches

## Key characteristics:

Hindwing red-  
orange spot with  
round black pupil



# Pale Swallowtail

(*Papilio eurymedon*)

## Flight Period:

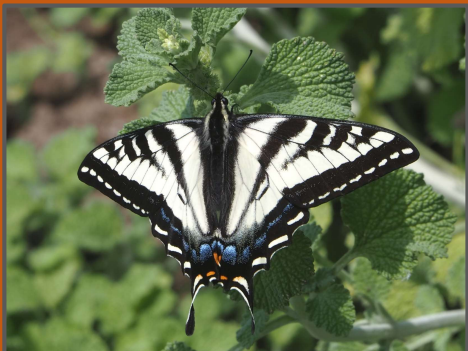
Apr - Oct

## Larval food:

Snowbrush  
ceanothus, and  
red alder

## Adult food:

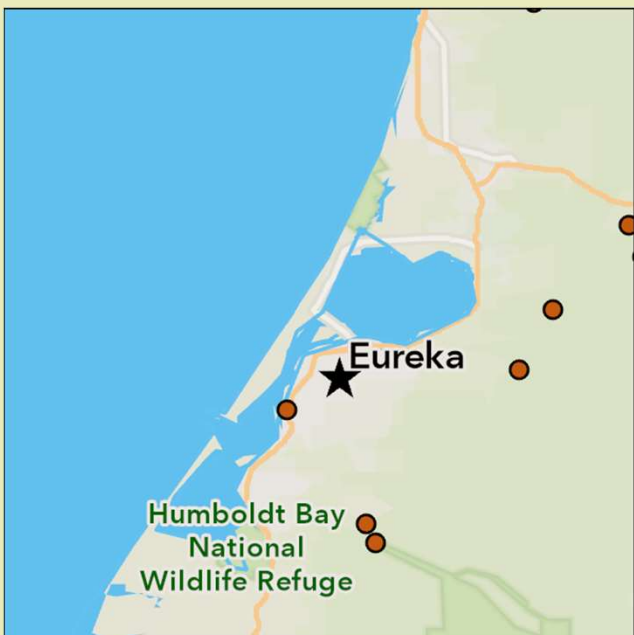
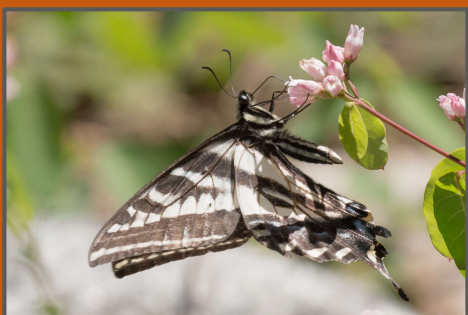
Chokecherry,  
mints, and  
phlox



Size: > 3 inches

## Key characteristics:

Chalky white with  
tiger stripes



# Western Tiger Swallowtail (*Papilio rutulus*)

## Flight Period:

Apr - Sep

## Larval food:

Bigleaf maples,  
willows, and  
aspen

## Adult food:

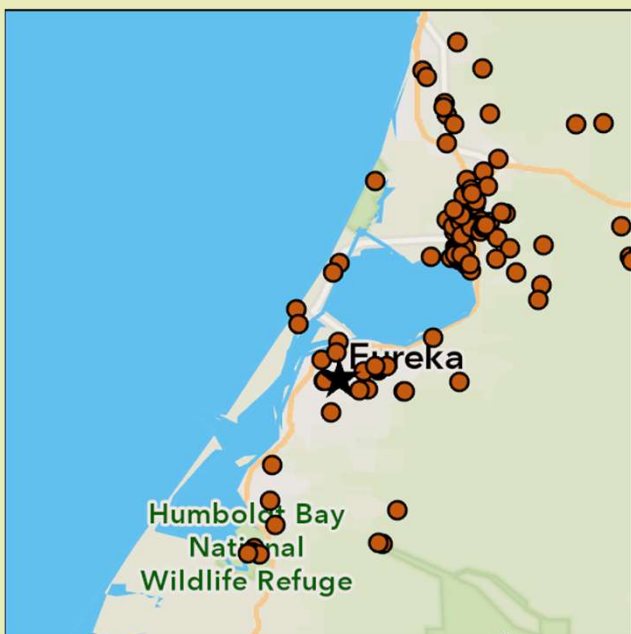
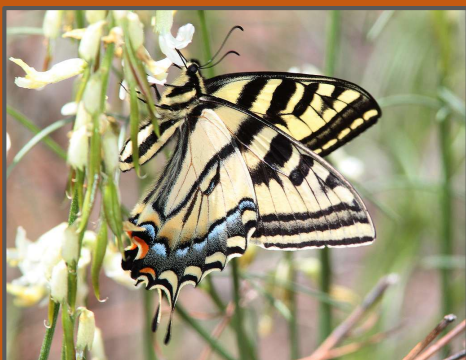
Blackberry,  
thistles,  
yarrow, and  
rhododendron



Size: <3.5 inches

## Key characteristics:

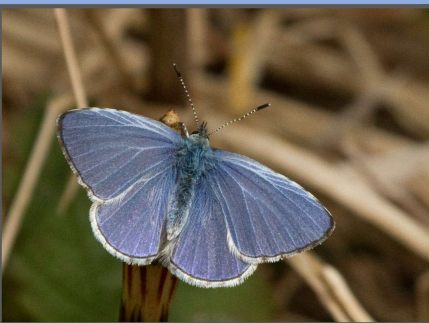
Bright yellow with  
bold tiger stripes





# Gossamer Wing Family (Lycaenidae)

- Includes coppers, hairstreaks, blues, and elfins
- Distinguished by their unique egg and larval shapes
- Often have mutualistic relationship between larvae and ants
- Named “gossamer wings” due to their wings which are delicate like the sheer fabric “gossamer”
- Nearly 4,700 species in this family worldwide





# Brown Elfin

(*Callophrys augustinus*)

## Flight Period:

Feb - Jul

## Larval food:

Salal,  
kinnickinnick,  
and manzanita

## Adult food:

Salal,  
kinnickinnick,  
manzanita,  
clover, and  
chokecherry

## Notes:

Habitually  
lands with  
wings folded



Size: <1.25 inches

Key characteristics:  
ventral hind wing is  
two-toned



# Western Pine Elfin (*Callophrys eryphon*)

## Flight Period:

Feb - Aug

## Larval food:

Lodgepole  
pine

## Adult food:

Yarrow,  
mustard, and  
dandelion

## Notes:

Habitually  
lands with  
wings folded



Size: <1.25 inches

Key characteristics:

Checked fringes and  
submarginal row of  
chevrons



# Acmon Blue

(*Icaricia acmon*)

## Flight Period:

Apr - Oct

## Larval food:

Legumes and coastal buckwheat

## Adult food:

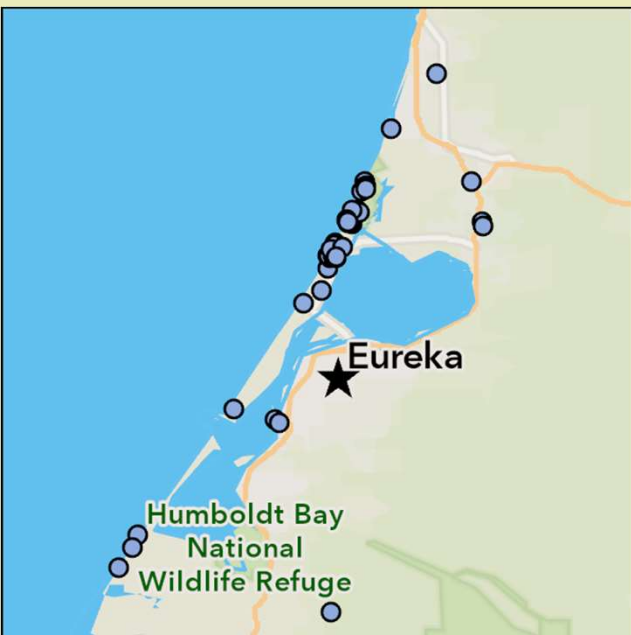
Goldenrod, buckwheats, and aster



Size: <1 inch

## Key characteristics:

orange aurorae on dorsal hindwing, but not on ventral forewing



# Echo Azure

(*Celastrina echo*)

## Flight Period:

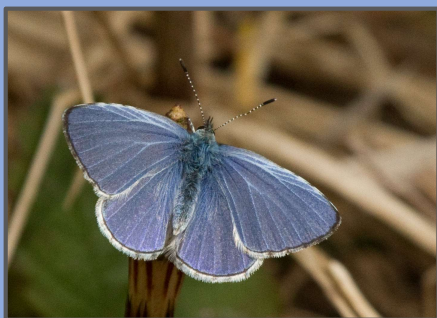
Feb - Oct

## Larval food:

Red osier  
dogwood,  
spiraea,  
buddleia, and  
huckleberry

## Adult food:

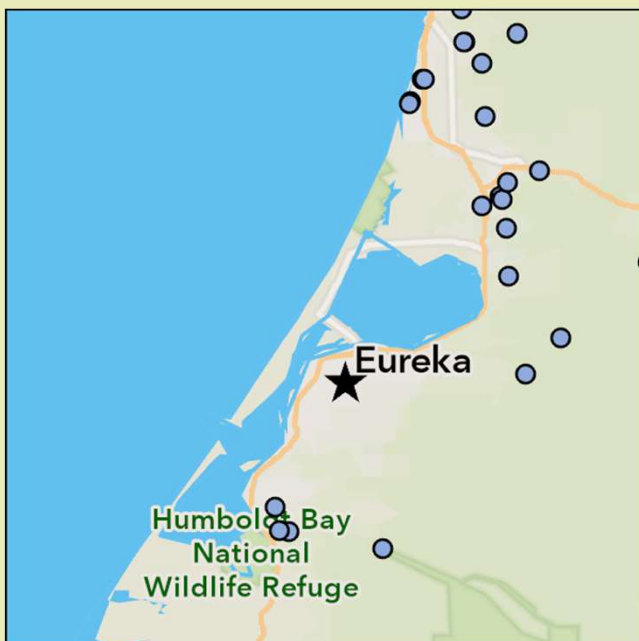
Goldfields,  
stream violet,  
and willow  
catkins



Size: <1.25 inches

## Key characteristics:

Ventral side has  
submarginal row of  
gray, zigzag  
chevrons



# Purplish Copper

(*Lycaena helloides*)

## Flight Period:

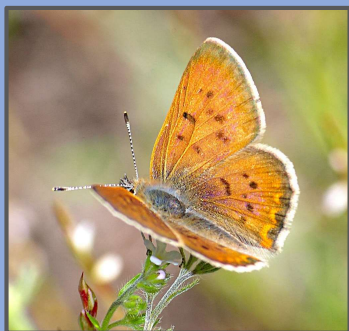
Apr - Oct

## Larval food:

Silverweed,  
herbaceous  
docks  
including  
*Rumex* spp.

## Adult food:

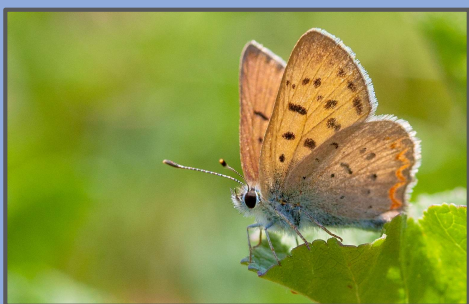
Garden thyme,  
catnip, white  
clover, blue  
and purple  
mints, and  
gumweeds



Size: <1.25 inches

Key characteristics:

Marginal orange zig-zag or dorsal and ventral hind wing





# Gray Hairstreak (*Strymon melinus*)

## Flight Period:

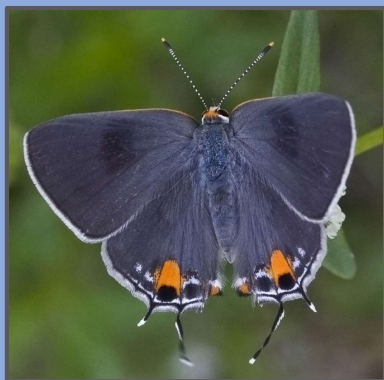
Mar - Oct

## Larval food:

Oaks, pines, legumes, and mallows

## Adult food:

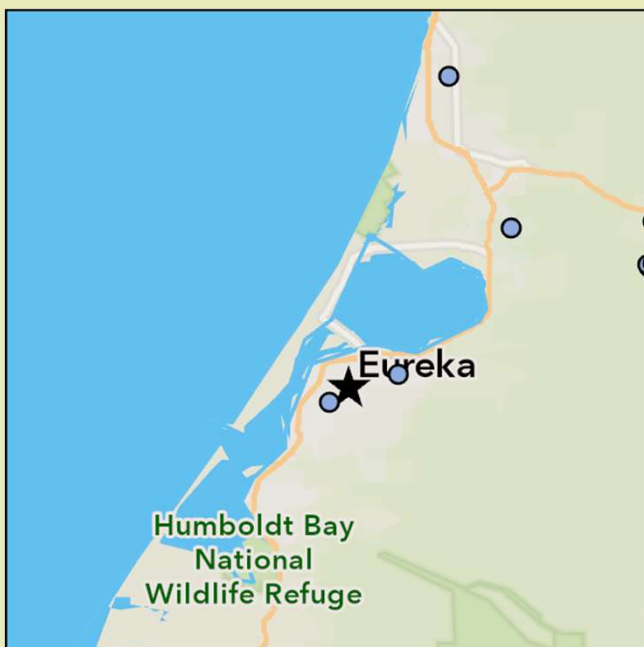
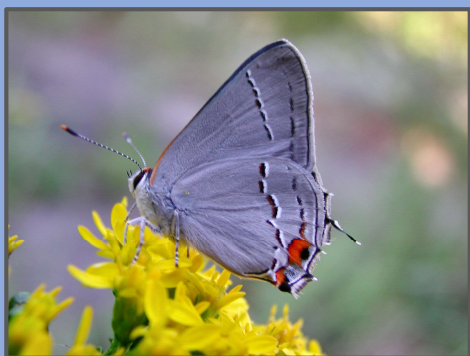
Goldenrod and mints



Size: <1.5 inches

## Key characteristics:

Gray wings; bright red-orange patch near the "tail"



# Whites & Sulphurs Family (Pieridae)

- Predominantly white or yellow/orange
- Larvae feed on the leaves of mustard and pea family plants
- Can be found in highly altered and in pristine environments
- Tips of legs are forked
- Nearly 1,100 species in this family worldwide



# Cabbage white (*Pieris rapae*)

## Flight Period:

Mar - Nov

## Larval food:

Nasturtium,  
and brassicas

## Adult food:

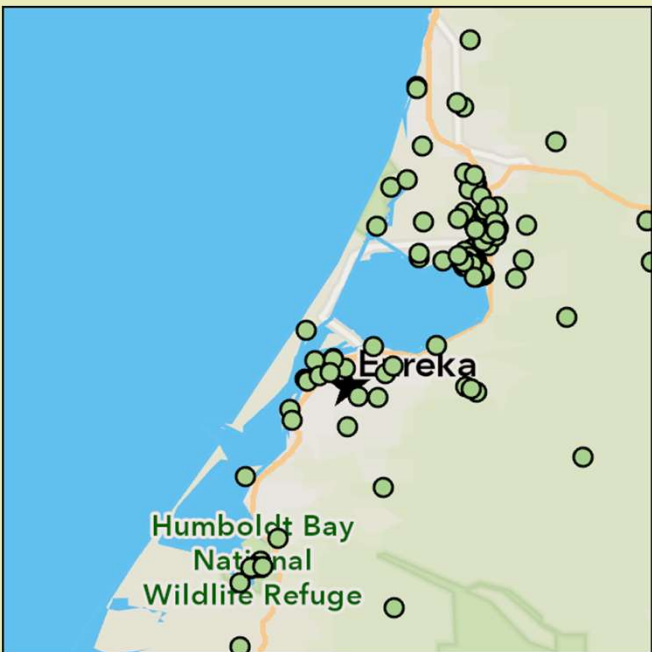
Peas, mints,  
and birdsfoot  
trefoil



Size: <2 inches

## Key characteristics:

Dorsal forewing is  
tipped with black.  
Mostly unmarked  
ventral hindwing



# Orange Sulphur (*Colias eurytheme*)

## Flight Period:

Mar - Nov

## Larval food:

Alfalfa,  
birdsfoot  
trefoil, and  
clover

## Adult food:

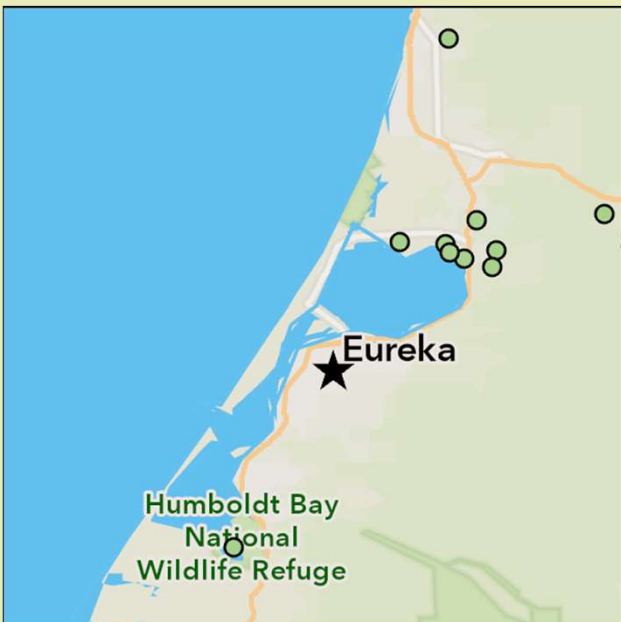
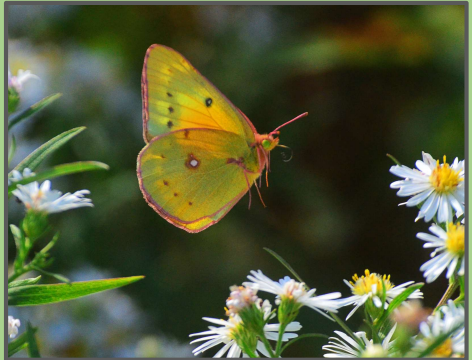
Asters,  
marigolds, red  
clover, alfalfa,  
and blackberry



Size: <2 inches

## Key characteristics:

Deep golden orange  
to warm yellow with  
orange patches in  
center of each wing





# Margined white (*Pieris marginalis*)

## Flight Period:

Mar - Oct

## Larval food:

Bittercress and  
watercress

## Adult food:

Dandelion,  
three-cornered  
leek, and  
salmonberry

## Notes:

Local subspecies  
Redwood White  
(*P. m. sequoia*)  
can be found in  
Redwood NP



Size: <2 inches

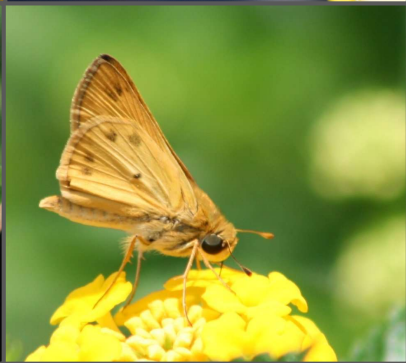
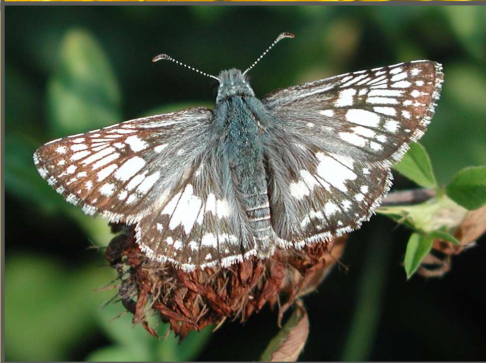
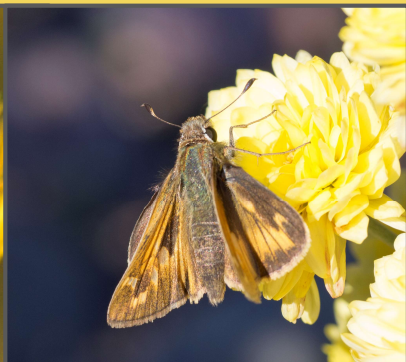
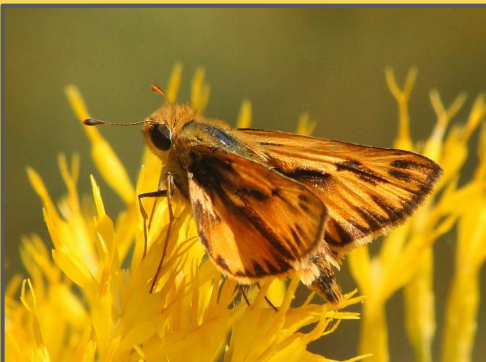
## Key characteristics:

Veins on ventral side  
distinctly outlined by  
black scales



# Skippers Family (Hesperiidae)

- Compact bodies, short wings, many with “jet wing pose” appearance
- Evolutionarily distinct among butterflies and moths
- Antennae clubs are sharply curved to slightly hooked
- Males exhibit scent scales on modified forewing patches
- Nearly 3,500 species in this family worldwide



# Woodland skipper (*Ochlodes sylvanoides*)

Flight Period:

Jun - Oct

Larval food:

Many common  
grasses

Adult food:

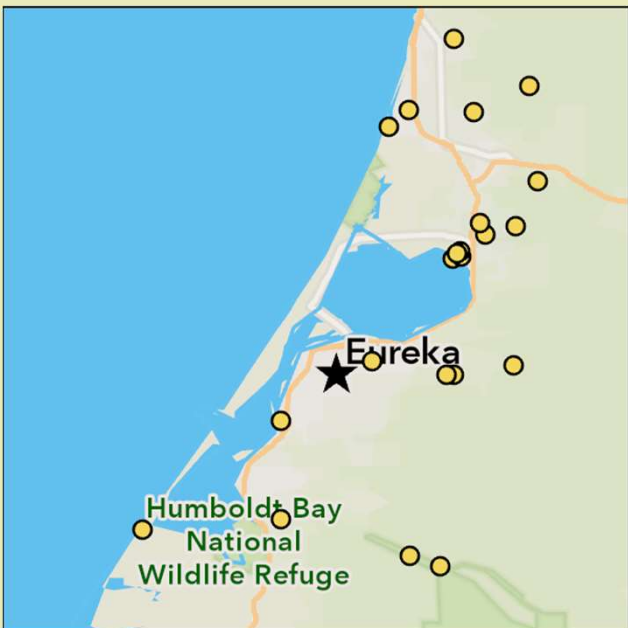
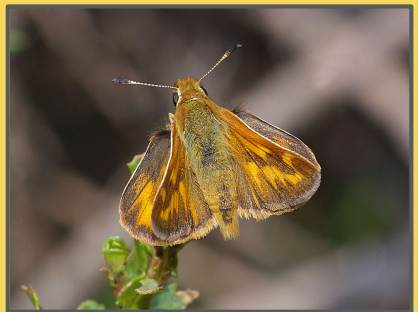
Gumweed,  
yarrow, and  
tansy ragwort



Size: > 1 inch

Key characteristics:

dark-scaled streak  
running diagonally  
across dorsal  
forewing, blocky  
square shapes yellow  
patches on ventral  
side



# Field Skipper

(*Atalopedes campestris*)

Flight Period:

May - Oct

Larval food:

Grasses

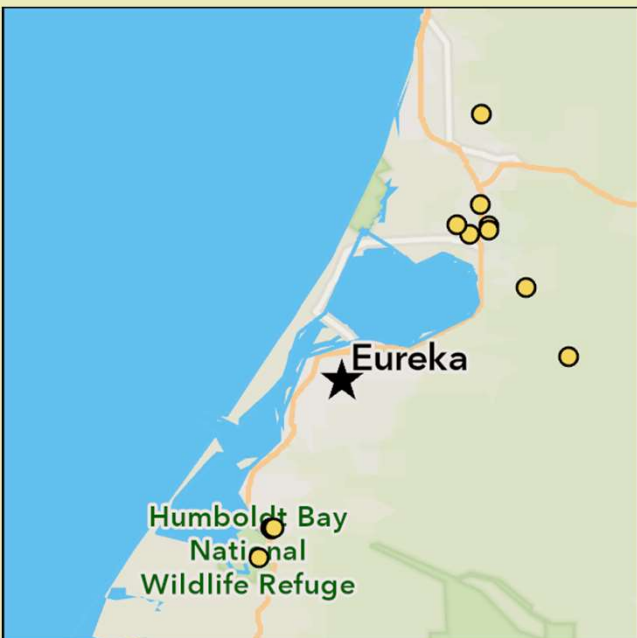
Adult food:

Asters,  
milkweeds,  
yarrow



Size: <1.5 inches

Key characteristics:  
noticeably larger and  
longer-winged than  
most skippers





# Fiery Skipper

(*Hylephila phyleus*)

Flight Period:

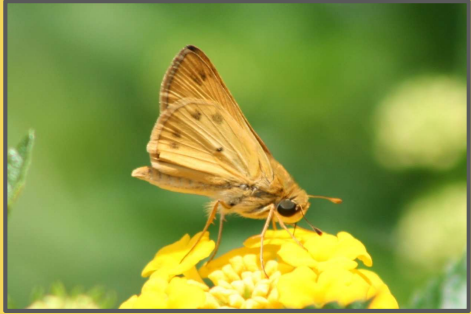
Apr - Oct

Larval food:

Grasses

Adult food:

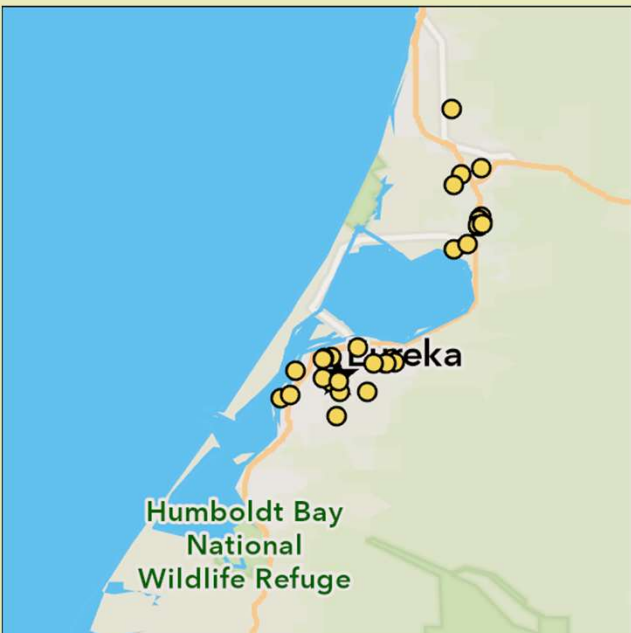
Wide variety of  
flowers  
including aster  
family plants



Size: >1.25 inches

Key characteristics:

Dark spots on light  
yellow-orange ventral  
side; very short  
antennae



# Common Checkered Skipper

(*Pyrgus communis*)

## Flight Period:

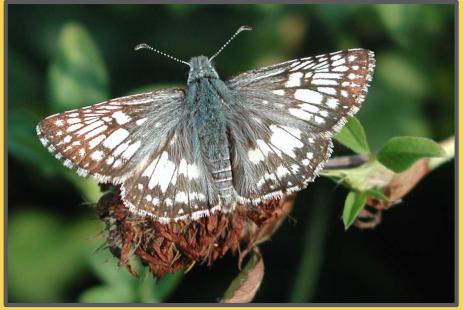
Apr - Sept

## Larval food:

Variety of herbs in the mallow family

## Adult food:

Marigold, thistle, alfalfa, and knapweed



Size: <1.5 inches

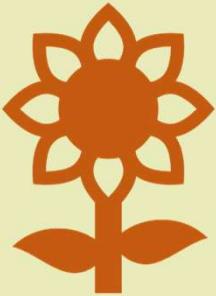
## Key characteristics:

White markings in multiple bands; short antennae



# Resources

Each map was created using entries from iNaturalist. To add your own wildlife observations, click on the maps icon.



Discover the nectar species your area by entering your zip code into the search box by clicking the flower icon.

Further explore Lepidoptera and their associated plants by clicking on the butterfly icon.

