Vanessa annabella (West Coast Lady)

Steve Cary,

Taxonomy

- **Class**: INSECTA
- **Order**: LEPIDOPTERA
- **Family**: NYMPHALIDAE
- **Genus**: Vanessa
- **Scientific Name**: *Vanessa annabella* (Field, 1971)
- **Common Name**: West Coast Lady
- **Synonyms**: Cynthia annabella Field, 1971 Field, 1971
- **Taxonomic Name Source**:Pelham, J. P. 2008. A catalogue of the butterflies of the United States and Canada with a complete bibliography of the descriptive and systematic literature. The Journal of Research on the Lepidoptera. Volume 40. 658 pp. Revised 14 February, 2012.

Agency Status

- **NMDGF**:
- **Federal Status**:
- **BLM Sensitive**:
- **USFS**:
- **IUCN Red List**: Least Concern
- **Nature Serve Global**: G5
- **NHNM State**: S4
- **NM Endemic**:NO

Description

Our three ‘Ladies’ look alike and close inspection can be required for identification. All are orange-red above with black marks. On West Coast Lady, the four ventral hindwing submarginal spots are of equal size and well hidden. The dorsal hindwing has four blue-pupiled ocelli (the two in the middle are larger) capped inwardly by dark eyebrows. The dorsal forewing subapical area has a pale orange bar that is white in Painted Lady.

Description courtesy of Steven J. Cary, Butterflies of New Mexico, 2024

Habitat and Ecology

Vanessa annabella can be found in open woodlands, meadows, roadsides and other weedy areas, gardens, and

prairies (Opler and Wright 1999). Some adults likely spend the winter in the deserts of the southwest U.S. to exploit the early spring blooms of their host plant, whereas in the summer they are more often found at higher altitudes, exploiting wildflower rich meadows (Brock 2008). Larval host plants include members of the Malvaceae family, such as Mallow (*Malva* spp.), Globe Mallow (*Sphaeralcea* spp.), and Hollyhock (*Alcea* spp.), and less commonly members of the Urticaceae family, such as Nettles (*Urtica* spp.) (Opler and Wright 1999, Lotts and Naberhaus 2017). As adults, this species is a generalist, nectaring at many kinds of flowers (Lotts and Naberhaus 2017). There are several broods per year in most regions (Lotts and Naberhaus 2017).

Geographic Range:

Vanessa annabella is a year-round resident in lowland California and southern Arizona, in the United States, and throughout much of Mexico (Opler and Wright 1999, GBIF.org 2020). In the springtime, this species starts a subtle, slow migration eastward from the west coast in the United States, as well as up in altitude elsewhere (Brock 2008). Therefore, it can be found as a colonist in the spring, summer, and fall throughout much of western North America, as far east as the Rocky Mountains and northward to southern British Columbia, Alberta, Saskatchewan and Manitoba (Opler and Wright 1999). It has also been found occasionally as a vagrant in west Texas, Oklahoma, Kansas, North Dakota, and Ontario (Opler and Wright 1999).

Conservation Considerations:

As this species is widespread, it likely occurs in many protected areas across North America. This butterfly is routinely picked up during surveys conducted by various monitoring programs including North American Butterfly Association (NABA) annual counts, PollardBase network surveys, and the Art Shapiro monitoring program in California. Population monitoring should continue. Habitat monitoring may also be necessary to better understand how to protect this species. While currently listed as Least Concern on the Red List of Threatened Species, due to recently reported declines, a re-assessment is underway.

Threats:

In areas where *Vanessa annabella* population declines appear to be taking place, the major threats include habitat conversion, agricultural intensification, and increased neonicotinoid pesticide use (Forister *et al.* 2011, Forister *et al.* 2016). While it is unclear which, if any, of these factors poses a threat to this species specifically, there is evidence that these threats, as well as climate change, have caused population declines in other species of butterflies (Flockhart *et al.* 2015, Warren *et al.* 2001, Forister *et al.* 2010). Considering the recorded declines in the Sacramento Valley of California, it is clear more research is needed to determine what threats may be impacting this species across its range, as well as at smaller, more localized levels. Other forms of habitat degradation, including effects of overgrazing on western rangelands and changes, to historical wildfire regimes, and invasion of non-native plants, also threaten western butterfly populations (Brooks *et al.* 2004, Debano 2006, Cassell *et al.* 2019). Finally, climate change in this region has been associated with declining butterfly populations in recent studies using long-term monitoring data (Forister *et al.* 2021, Crossley *et al.* 2021).

Population:

This species was once reportedly one of the most common butterflies in lowland California (Brock 2008). However, mounting evidence suggests this species is facing sharp declines, especially in California, which is the core of the range of this species. Long term population data collected by the North American Butterfly Association (NABA), Art Shapiro (University of California, Davis) and the North American Butterfly Monitoring Network, from sites across the

western U.S., suggest the species has declined by 55-69% in the last 10 years (Forister *et al.* 2011, Forister *et al.* 2023). It is unclear if similar declines are taking place in Mexico.

References:

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More Information